**Science – MYP Year 3 Rubric**

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| **Level** | **Criterion A:****Knowing and Understanding** | **Criterion B:** **Inquiring and Designing** | **Criterion C:** **Processing and Evaluating** | **Criterion D:****Reflecting on the Impacts of Science** |
| **0** | The student does not reach a standard of described by any of the descriptors below. | The student does not reach a standard of described by any of the descriptors below. | The student does not reach a standard of described by any of the descriptors below. | The student does not reach a standard of described by any of the descriptors below. |
| **1-2** | The student is able to: | The student is able to: | The student is able to: | The student is able to: |
| i. **recall** scientific knowledge | i. **state** a problem or question to be tested by a scientific investigation, with **limited success** | i. **collect and present** data in numerical and/or visual forms | i. **state** the ways in which science is used to address a specific problem or issue |
| ii. apply scientific knowledge and understanding to **suggest solutions** to problems set in **familiar situations** | ii. **state** a testable hypothesis | ii. **accurately interpret** data | ii. **state** the implications of using science to solve a specific problem or issue, interacting with a factor |
| iii. **apply** information to **make judgments** | iii. **state** the variables | iii. **state** the validity of a hypothesis **with limited reference** to of a scientific investigation  | iii. **apply** scientific language to communicate understanding but does so **with limited success** |
| iv. design a **method, with limited success** | iv. **state** the validity of the method **with limited reference** to a scientific investigation | iv. document sources, **with limited success** |
| v. **state limited** improvements or extensions to the method  |
| **3-4** | The student is able to: | The student is able to: | The student is able to: | The student is able to: |
| i. **state** scientific knowledge | i. **state** a problem or question to be tested by a scientific investigation | i. **correctly collect and present** data in numerical and/or visual forms | i. **outline** the ways in which science is used to address a specific problem or issue |
| ii. apply scientific knowledge and understanding to **solve problems** set in **familiar situations** | ii. **outline** a testable hypothesis **using scientific reasoning** | ii. **accurately interpret** data and **describe** results | ii. **outline** the implications of using science to solve a specific problem or issue, interacting with a factor |
| iii. **apply** information to make **scientifically supported judgments** | iii. **outline** how to manipulate the variables, and **state** how **relevant data** will be collected | iii. **state** the validity of a hypothesis based on the outcome of a scientific investigation | iii. **sometimes apply** scientific language to communicate understanding |
| iv. design a **safe method** in which he or she **selects materials and equipment** | iv. **state** the validity of the method based on the outcome of a scientific investigation | iv. **sometimes** document sources **correctly** |
| v. **state** improvements or extensions to the method that would benefit the scientific investigation |
| **5-6** | The student is able to: | The student is able to: | The student is able to: | The student is able to: |
| i. **outline** scientific knowledge | i. **outline** a problem or question to be tested by a scientific investigation | i. **correctly collect, organize, and present** data in numerical and/or visual forms | i. **summarize** the ways in which science is used to address a specific problem or issue |
| ii. apply scientific knowledge and understanding to **solve problems** set in **familiar situations** and **suggest solutions** to problems set in **unfamiliar situations** | ii. **outline and explain** a testable hypothesis **using scientific reasoning** | ii. **accurately interpret** data and **describe** results **using scientific reasoning** | ii. **describe** the implications of using science and its application to solve a specific problem or issue, interacting with a factor |
| iii. **interpret** information to **make scientifically supported judgments** | iii. **outline** how to manipulate the variables, and **outline** how **sufficient, relevant** **data** will be collected | iii. **outline** the validity of a hypothesis based on the outcome of a scientific investigation | iii. **usually apply** scientific language to communicate understanding **clearly and precisely** |
| iv. design a **complete and safe method** in which he or she **selects appropriate materials and equipment** | iv. **outline** the validity of the method based on the outcome of a scientific investigation | iv. **usually** document sources correctly |
| v. **outline** improvements or extensions to the method that would benefit the scientific investigation |
| **7-8** | The student is able to: | The student is able to: | The student is able to: | The student is able to: |
| i. **describe** scientific knowledge | i. **describe** a problem or question to be tested by a scientific investigation | i. **correctly collect, organize, transform and present** data in numerical and/or visual forms | i. **describe** the ways in which science is applied and used to address a specific problem or issue |
| ii. apply scientific knowledge and understanding to **solve problems** set in **familiar and unfamiliar situations**  | ii. **outline and explain** a testable hypothesis **using correct scientific reasoning** | ii. **accurately interpret** data and **describe** results **using correct scientific reasoning** | ii. **describe and analyse** the implications of using science and its application to solve a specific problem or issue, interacting with a factor |
| iii. **analyse** information to **make scientifically supported judgments** | iii. **describe** how to manipulate the variables, and **describe** how **sufficient, relevant data** will be collected | iii. **discuss** the validity of a hypothesis based on the outcome of a scientific investigation | iii. **consistently apply** scientific language to communicate understanding **clearly and precisely** |
| iv. design a **logical, complete and safe method** in which he or she **selects appropriate materials and equipment** | iv. **discuss** the validity of the method based on the outcome of a scientific investigation | iv. document sources **completely** |
| v. **describe** improvements or extensions to the method that would benefit the scientific investigation |