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| cid:image001.jpg@01D0E877.2BB181B0 | **GIS MYP Science Department** **Grade 7&8 Unit 1 – The Scientific Method (formative assessment)** | Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Key concept | Related concepts | Global context |
| **Relationships** | **Evidence Function** | **Scientific and technical innovation –** methods |
| **Statement of inquiry:****Methods** for the collection of **evidence** of **relationships** depend on their **function** |

Criterion B: Inquiring and designing

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|  | **i. What are you going to investigate?**  | **ii. What do you think is going to happen?**  | **iii. What are you going to measure?** | **iv. How are you going to do your investigation?**  |
| 1-2 | * You write a research question but it doesn’t have the necessary information
 | * You say what you think will happen to the DV
 | * You state the variables (IV and DV at least)
 | * You have a method but it is lacking steps telling you how to change the IV and/or measure the DV, or is difficult to follow.
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| 3-4 | * You state a research question that could work, but it is not in the correct format
 | * You say what you think will happen to the DV when the IV is increased
 | * You say (correctly) what the IV and DV are and how to control/measure them
* You give 2-3 control variables
* Your method contains instructions to take relevant data
 | * You write a method, but it will not allow you to take sufficient data.
* You have considered safety
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| 5-6 | * You write a research question in the correct format, containing the IV, DV and a CV
 | * You say what you think will happen to the DV when the IV is increased.
* You briefly explain why, using science
 | * You say (correctly) what the IV and DV are and how you will control/measure them
* You give 2-3 control variables and say how you will measure them
* Your method contains brief instructions to take 5 data points, repeated for reliability
 | * You have an equipment list.
* You write a method, which will allow you to take enough data (5 data points, repeated for reliability), but some points need more explanation
* You have given safety instructions which are specific to this investigation.
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| **7-8** | * **You state a research question in the correct format, containing the IV, DV and a CV.**
* **You have given background information to explain the science needed to understand the RQ**
 | * **You say what you think will happen to the DV when the IV is increased**
* **You clearly explain why, using correct science**
 | * **You say (correctly) what the IV and DV are and how you will control/measure them**
* **You give 4-5 control variables, say how you will measure them**
* **Your method contains clear instructions to take 5 data points, which are repeated for reliability**
 | * **You have an equipment list.**
* **You write a method, which will allow you to take enough data (5 data points, repeated for reliability) and is clear, complete and logical**
* **You have given safety instructions which are specific to this investigation.**
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Criterion C: Processing and evaluating

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|  | **i. What data do you have?** | **ii. What does the data mean?** | **iii. Does your prediction fit the data?** | **iv. What does the data tell you about your method?** | **v. How could you improve your method?** |
| 1–2 | * You have correctly collected data
* You have presented your data either as a table or a graph
 | * You have described your graph.
* You have made a correct statement to say what your graph shows.
 | * You say whether your hypothesis is correct
 | * You comment on the quality of your data.
* You give 1-2 suggestions of weakness about your investigation.
 | * You give 2 ways that your investigation could be improved.
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| 3–4 | * You have correctly collected data
* You have correctly organized your raw data in a table with correct headings and units
* Your table has a title
 | * You have described your graph.
* You have made a correct statement to say what happens to the DV when the IV increases.
 | * You correctly say whether your hypothesis is correct
 | * You correctly comment on the quality of your data, with evidence.
* You give 2 suggestions of weakness about your investigation.
 | * You give 2 ways to improve your investigation that would benefit the scientific investigation.
* Your improvements name specific pieces of apparatus (where appropriate)
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| 5–6 | * You have correctly collected data.
* You have correctly organized your raw data in a table with correct headings and units
* You have calculated average and produced a processed data table
* Your tables have titles
 | * You have described your graph.
* You have made a statement to say what happens to the DV when the IV increases.
* You have briefly explained why this happens.
 | * You say whether your hypothesis is correct and explain why
 | * You correctly comment on the quality of your data, with evidence.
* You give 3 or more suggestions of weakness about your investigation.
 | * You give 3 or more ways to improve your investigation that would benefit the scientific investigation.
* Your improvements name specific pieces of apparatus (where appropriate)
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| **7–8** | * **You have correctly collected data.**
* **You have correctly organized your raw data in a table with correct headings and units**
* **You have calculated average and produced a processed data table**
* **Your tables have titles**
* **You have produced an appropriate graph from your data.**
 | * **You have described your graph.**
* **You have made a statement to say what happens to the DV when the IV increases, if possible, noting a mathematical relationship.**
* **You have explained why this happens using correct scientific reasoning**
 | * **You say whether your hypothesis is correct giving details**
* **You give evidence connecting your graph/data to your hypothesis.**
 | * **You correctly comment on the quality of your data, with evidence.**
* **You give 3 or more suggestions of weakness about your investigation.**
* **You discuss the effect of the weakness on the data.**
 | * **You give 3 or more ways to improve your investigation that would benefit the scientific investigation.**
* **You discuss why you would make each improvement.**
* **Your improvements name specific pieces of apparatus (where appropriate).**
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Evidence Map

Criterion B:

i Grade\_\_\_

Evidence:

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Criterion C:

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