

## IB SEHS Internal Assessment Outline

This year, the IB SEHS IA will consist of ONE full lab report that you create from beginning to end. It is graded on all parts of a lab beginning with a research question that you design and then carry out. Below is how the assessment criteria are graded by both me and the IB Gods. If you are testing in this subject, your IA will go to the IB Gods. Regardless of whether you are testing or not, your IA will go in the lab grade portion of this class. It is the heaviest weighted lab of the year, so, therefore, will have the most impact on your grade for the lab category section.

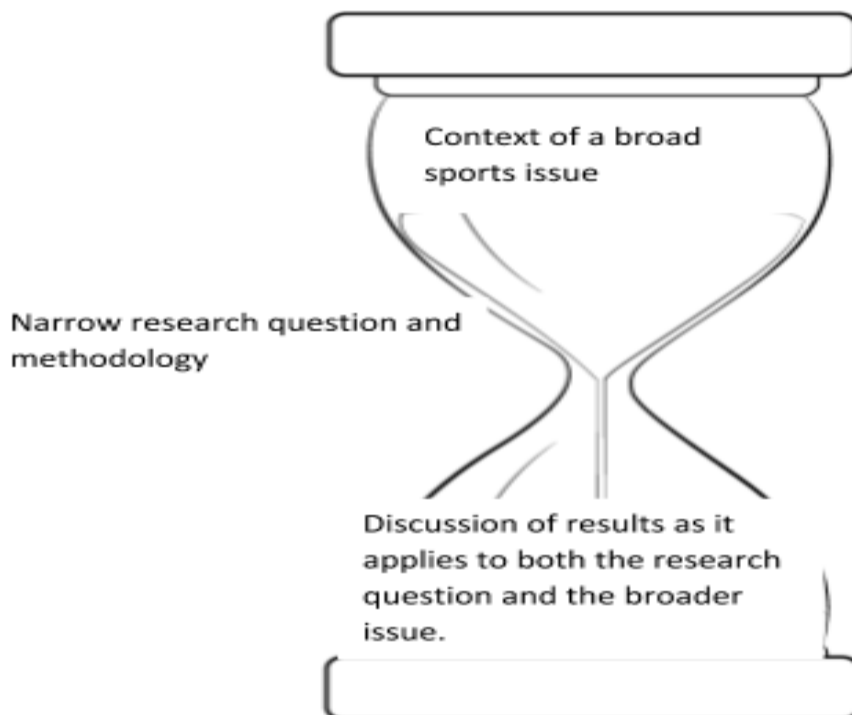
Personal engagement	Exploration	Analysis	Evaluation	Communication	Total
2 (8%)	6 (25%)	6 (25%)	6 (25%)	4 17%	24 (100%)

As you look at the criteria on the next pages, notice the difference between how the points are rewarded based on the depth in which you cover the criteria. It is the difference between, for example listing vs. explaining. You should refer to your “IB Glossary of Command Terms” given to you at the beginning of the year to make sure that you are meeting the requirements for the command statements (what does outline, state, discuss, explain mean?).

The internal assessment should take you a total of about 10 hours. This includes developing the research question, consultation with the teacher, creating and refining the methodology (procedure) and data collection. You will need to spend additional hours typing up the report, analyzing and concluding.

The report should be between 1,500 to 2,250 words long. **Your report should not be longer than 2,250 words. You will lose points for going over or under the word count.**

The overall structure of the report is that of an hourglass.



## 1. Personal Engagement

This criterion assesses the extent to which you establish and explore a topic or issue related to Sport, Exercise or Health Science for an investigation and develops this to state a relevant and focused research question. Most important is why you are interested in this.

So to get the top marks here you need to:

- Discuss and explain its relevance within a sporting context
- Develop a focused/marrow research question
- Explain how the issue is linked to the research question
- Why it matters to you.

Mark	Descriptor
0	The student's report does not reach a standard described by the descriptors below.
1	<p>The evidence of personal engagement with the exploration is limited with little independent thinking, initiative or creativity.</p> <p>The justification given for choosing the research question and/or the topic under investigation does not demonstrate <b>personal significance, interest or curiosity</b>.</p> <p>There is little evidence of <b>personal input and initiative</b> in the designing, implementation or presentation of the investigation.</p>
2	<p>The evidence of personal engagement with the exploration is clear with significant independent thinking, initiative or creativity.</p> <p>The justification given for choosing the research question and/or the topic under investigation demonstrates <b>personal significance, interest or curiosity</b>.</p> <p>There is evidence of <b>personal input and initiative</b> in the designing, implementation or presentation of the investigation.</p>

## 2. Exploration

This criterion assesses the extent to which the student has developed appropriate methods to gather data that is relevant to the research question. This data could be primary or secondary, qualitative or quantitative and may utilize techniques associated with either experiential or social science methods of inquiry. There is an assessment of safety, environmental and ethical considerations where applicable.

So to get the top marks here you need to:

- Design an appropriate way to collect enough data to study your research question. Depending on your research question; this means you need to do as many trials as possible/ More data = more conclusive results.
- Explain your method so that someone else could repeat the data collection in another environment.
- Explain why you have used the methods you have used
- Show that you have looked at any ethical issues or risks.

Mark	Descriptor
0	The student's report does not reach a standard described by the descriptors below.
1-2	<p>The topic of the investigation is identified and a research question of some relevance is <b>stated but it is not focused</b>.</p> <p>The background information provided for the investigation is <b>superficial</b> or of limited relevance and does not aid the understanding of the context of the investigation.</p> <p>The methodology of the investigation is only appropriate to address the research question to a very limited extent since it takes into consideration few of the significant factors that may influence the relevance, reliability and sufficiency of the collected data.</p> <p>The report shows evidence of limited awareness of the significant <b>safety</b>, ethical or environmental issues that are <b>relevant to the methodology of the investigation*</b>.</p>

Mark	Descriptor
3–4	<p>The topic of the investigation is identified and a relevant but not fully focused research question is described.</p> <p>The background information provided for the investigation is mainly appropriate and relevant and aids the understanding of the context of the investigation.</p> <p>The methodology of the investigation is mainly appropriate to address the research question but has limitations since it takes into consideration only some of the significant factors that may influence the relevance, reliability and sufficiency of the collected data.</p> <p>The report shows evidence of some awareness of the significant <b>safety</b>, ethical or environmental issues that are <b>relevant to the methodology of the investigation*</b>.</p>
5–6	<p>The topic of the investigation is identified and a relevant and fully focused research question is clearly described.</p> <p>The background information provided for the investigation is entirely appropriate and relevant and enhances the understanding of the context of the investigation.</p> <p>The methodology of the investigation is highly appropriate to address the research question because it takes into consideration all, or nearly all, of the significant factors that may influence the relevance, reliability and sufficiency of the collected data.</p> <p>The report shows evidence of full awareness of the significant <b>safety</b>, ethical or environmental issues that are <b>relevant to the methodology of the investigation*</b>.</p>

### 3. Analysis

This criterion assesses the extent to which you have collected, recorded, processed, and interpreted the data in ways that are relevant to the research question. The patterns in the data are correctly interpreted in order to reach a valid conclusion.

To get the top marks here you need to:

- Record your data in a way that is clear to everyone else—remember the moderators reading your report do not know as much about the report as you do.
- Present the data in a clear way so that it helps you and others interpret it—remember axes titles and clear labels for everything.
- Spot the trends and patterns and describe and explain them

Mark	Descriptor
0	The student's report does not reach a standard described by the descriptors below.
1–2	<p>The report includes <b>insufficient relevant</b> raw data to support a valid conclusion to the research question.</p> <p>Some <b>basic</b> data processing is carried out but is either too <b>inaccurate or too insufficient to lead to a valid</b> conclusion.</p> <p>The report shows evidence of little consideration of the impact of measurement uncertainty on the analysis.</p> <p>The processed data is incorrectly or insufficiently interpreted so that the conclusion is invalid or very incomplete.</p>



Mark	Descriptor
3–4	<p>The report includes relevant but incomplete quantitative and qualitative raw data that could support a simple or partially valid conclusion to the research question.</p> <p>Appropriate and sufficient data processing is carried out that could lead to a broadly valid conclusion but there are significant inaccuracies and inconsistencies in the processing.</p> <p>The report shows evidence of some consideration of the impact of measurement uncertainty on the analysis.</p> <p>The processed data is interpreted so that a broadly valid but incomplete or limited conclusion to the research question can be deduced.</p>
5–6	<p>The report includes sufficient relevant quantitative and qualitative raw data that could support a detailed and valid conclusion to the research question.</p> <p>Appropriate and sufficient data processing is carried out with <b>the accuracy</b> required to enable a conclusion to the research question to be drawn that is fully <b>consistent</b> with the experimental data.</p> <p>The report shows evidence of full and appropriate consideration of the impact of measurement uncertainty on the analysis.</p> <p>The processed data is correctly interpreted so that a completely valid and detailed conclusion to the research question can be deduced.</p>

#### 4. Evaluation

This criterion assesses the extent to which the student creates a conclusion in the context of the sporting context, and carries out an evaluation of the investigation.

So to get the top marks here you need to:

- Look at your conclusion and its link to the sporting context.
- Reach a conclusion based on the data—that may not be what you expected.

Mark	Descriptor
0	The student's report does not reach a standard described by the descriptors below.
1–2	<p>A conclusion is <b>outlined</b> which is not relevant to the research question or is not supported by the data presented.</p> <p>The conclusion makes superficial comparison to the accepted scientific context.</p> <p>Strengths and weaknesses of the investigation, such as limitations of the data and sources of error, are <b>outlined</b> but are restricted to an <b>account of the practical</b> or procedural issues faced.</p> <p>The student has <b>outlined</b> very few realistic and relevant suggestions for the improvement and extension of the investigation.</p>
3–4	<p>A conclusion is described which is relevant to the research question and supported by the data presented.</p> <p>A conclusion is described which makes some relevant comparison to the accepted scientific context.</p> <p>Strengths and weaknesses of the investigation, such as limitations of the data and sources of error, are described and provide evidence of some awareness of the methodological issues* involved in establishing the conclusion.</p> <p>The student has described some realistic and relevant suggestions for the improvement and extension of the investigation.</p>

Mark	Descriptor
5–6	<p>A detailed conclusion is described and justified which is entirely relevant to the research question and fully supported by the data presented.</p> <p>A conclusion is correctly described and justified through relevant comparison to the accepted scientific context.</p> <p>Strengths and weaknesses of the investigation, such as limitations of the data and sources of error, are discussed and provide evidence of a clear understanding of the methodological issues* involved in establishing the conclusion.</p> <p>The student has discussed realistic and relevant suggestions for the improvement and extension of the investigation.</p>

## 5. Application and Communication

This criterion assesses the extent to which the student identifies and evaluates one way to apply the outcomes of the investigation in relation to the broader sporting context that was identified at the start of the project.

So to get the top marks here you need to:

- Give one solution to the problem/issue you have studied
- Explain how it would be effective and what problems it may encounter.
- Evaluate what you have done—what was good, what was bad, what worked, what didn't
- **Suggest how you could improve your investigation and maybe EXTEND IT WITH FURTHER RESEARCH. The IB Gods DO NOT LIKE it when your improvement is “collect more data points”, or “do more trials”. Instead, it is often helpful to look at which variables were not kept controlled, but could have had an impact on the overall results. Then discuss how you could control the variable for future investigation and why it is important.**

Mark	Descriptor
0	The student's report does not reach a standard described by the descriptors below.
1–2	<p>The presentation of the investigation is unclear, making it difficult to understand the focus, process and outcomes.</p> <p>The report is not well structured and is unclear: the necessary information on focus, process and outcomes is missing or is presented in an incoherent or disorganized way.</p> <p>The understanding of the focus, process and outcomes of the investigation is obscured by the presence of inappropriate or irrelevant information.</p> <p>There are many errors in the use of subject-specific terminology and conventions*.</p>
3–4	<p>The presentation of the investigation is clear. Any errors do not hamper understanding of the focus, process and outcomes.</p> <p>The report is well structured and clear: the necessary information on focus, process and outcomes is present and presented in a coherent way.</p> <p>The report is relevant and concise thereby facilitating a ready understanding of the focus, process and outcomes of the investigation.</p> <p>The use of subject-specific terminology and conventions is appropriate and correct. Any errors do not hamper understanding.</p>

The report must be correctly referenced. You will not be penalized for a lack of bibliography or other means of citation, BUT such an omission would probably be treated under the IB Diploma Academic Honesty Policy—this can mean an F on the assignment and the loss of your diploma, if you are a candidate.