IA CHECKLIST – E. Descriptive Statistics

This section is worth.....

- 4 marks out of 20 for SL
- 2 marks out of 28 for HL

General
- Provide a clear heading:
  - For SL the heading is: “E. Results”
  - For HL the heading is: “E. Results: Descriptive”
- Length of two paragraphs, approximately 80 words total
- You should include a table of the raw data used for your descriptive statistics in the appendix.
- You must (at some point) reference the raw data in your appendix in your results section. For example: "Using raw data found in Appendix 5..., the mean was calculated (see appendix 6).”

Paragraph 1
- State the type of data collected (level of measurement of the dependent variable – ordinal, ratio, interval, etc)
- Indicate the measure of central tendency you select (such as the mean)
- Explain (give reasons) for your choice of central tendency – refer to the level of measurement (such as ordinal, interval, etc)
- Indicate the measure of dispersion you select (such as the standard deviation)
- Explain (give reasons) for your choice of central tendency – refer to the level of measurement (such as interval, nominal, etc)
- ONE table of data included and complete
  - clear title which is reflective of the aim/hypothesis
  - units of measurement are indicated
  - center data in the chart and provide nor more than two decimal places (4 significant digits)
  - underline and bold "table 1." then italicize the title.
- ONE graph of data included and complete
  - Clear title
  - Axis labeled
  - Legend and units of measurement
  - The graph must represent the IV and/or DV

Paragraph 2
- Describe the described results (ALL of them) in word form – DO NOT make a conclusion. Just state/describe them.

Possible Phrases/Format to use in writing this section:
- The data collected for the dependent variable was .....(see appendix...) which is .....data (type of data). Because of this the measure of central tendency was used was.....and the measure of dispersion was...... The mean can be used as there are no outliers and......
- The mean and standard deviation were calculated (see appendix...)”
- The time take to ..... in the ....control condition was...while the standard deviation was...
- The mean time take to .... in the....experimental condition was.....while the standard deviation was....see Table 1 and Graph 1 below for this information in table and graphical form.

Example of effective an effective table:

Table 1: Mean time in seconds taken to name colors of 24 words describing the color (congruence) and 24 words describing after colors (incongruence).

<table>
<thead>
<tr>
<th>Type of Words on sheet</th>
<th>Means (in seconds)</th>
<th>Standard deviation (in seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congruent</td>
<td>13.1</td>
<td>2.48</td>
</tr>
<tr>
<td>Incongruent</td>
<td>19.2</td>
<td>3.65</td>
</tr>
</tbody>
</table>
Example of effective an effective graph:

**Figure 1:** Column graph displaying the mean value of number of words correctly recalled under cued-recall (CR) and non-cued (NCR) conditions.

![Mean number of words correctly recalled under cued-recall (CR) and non-card recall (NCR) conditions](image)

**Common mistakes or weaknesses of this section to avoid:**

- Tests of central tendency may not be the most relevant (the median is sometimes better to report that the mean when outliers may skew the data)
- Explanation about WHY a type of statistic is used is not made sufficiently clear.
- Graphing of raw data instead of descriptive statistics
- Poor labeling of the graphs or charts
- Data is compared that is irrelevant to the hypothesis

☐ **IMPORTANT:** When you finish writing this section, **assess your performance by circling the number which most accurately describes/represents your work in this section.**

**E Results: Descriptive**

<table>
<thead>
<tr>
<th>Marks</th>
<th>Level descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>There are no results or the results are irrelevant to the stated hypotheses of the student's experimental study. Relevant descriptive statistics have not been applied to the data. There is no graphing of data.</td>
</tr>
<tr>
<td>1</td>
<td>Results are stated and accurate and reflect the hypotheses of the research. Descriptive statistics (one measure of central tendency and one measure of dispersion) are applied to the data, but their use is not explained. The graph of results is not accurate, is unclear or is not sufficiently related to the hypotheses of the study. Results are not presented in both words and tabular form.</td>
</tr>
<tr>
<td>2</td>
<td>Results are clearly stated and accurate and reflect the hypotheses of the research. Appropriate descriptive statistics (one measure of central tendency and one measure of dispersion) are applied to the data and their use is explained. The graph of results is accurate, clear and directly relevant to the hypotheses of the study. Results are presented in both words and tabular form.</td>
</tr>
</tbody>
</table>