**Year 11**

**PSYCHOLOGY ATAR 2021**

**TASK 2 – Lab Report**

**Relationship between handedness and hemispheric dominance**

**(Weighting: 10%)**

To be submitted by: \_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| **MARKS AVAILABLE** | **YOUR MARK** |
| **40** |  |
|  | **%** |

Psychology – ATAR Year 11

Task 2 – Unit 1

**Assessment type:** Investigation

**Conditions**

Time for the task:

* one week to conduct the investigation and collect the data
* one lesson to write the scientific report in class under supervised conditions

Materials required for writing the scientific report:

* data (tables and graphs)
* list of references
* questionnaire and responses
* a half-A4 page of notes

**Task weighting**

10% of the school mark for this pair of units

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**Relationship between handedness and hemispheric dominance**

The tendency for one hemisphere of the brain to control language production and comprehension and to initiate movement more often than the other is referred to as hemispheric dominance. This dominance occurs because the dominant hemisphere sends inhibitory messages to the other hemisphere via their connection with the corpus callosum (van Iersel *et al*., 2005). This dominance usually refers to hemispheric dominance for language and movement, but it is possible for individuals to have preferences for left- or right-brain styles of thought.

Dominance is also prevalent in handedness, which refers to which hand an individual prefers to use. For example, ninety per cent of all humans are right-handed; ten per cent are left-handed (Hackett, 2007).

The aim of this investigation is to establish and examine the relationship between handedness (left- or right-hand preference and strength) and hemispheric dominance (left- or right-brained).

You will be asked to individually complete a questionnaire. From this questionnaire, a handedness score (which is your hand dominance and the strength of this dominance) will be generated and your hemispheric dominance will be identified using your three best subjects as a guide.

A handedness score and hemispheric dominance will be collected from all participants and collated to form a set of results for the class to use.

**You will be presenting your results as a formal lab report, written in class under test conditions.**

Your formal report will include:

* an introduction – provide information and research related to the topic for the investigation
* method – describe the participants, materials and procedures so that the investigation can be replicated
* results – represent data in a written summary, tables and graphs
* discussion
  + discuss the results of the investigation and how they relate to relevant psychological theories
  + evaluate the design of the investigation and explain how the investigation could be improved
  + discuss how ethical issues were addressed
  + explain the relevance of the results to the population from which the sample was drawn, and to theory or other research
* conclusion - relates the results to the hypothesis or research question
* references – provide an alphabetical list of any references used in the report
* appendix – attach your data sheet.

**Marking key – Relationship between handedness and hemispheric dominance**

|  |  |
| --- | --- |
| **Description** | **Marks** |
| **Introduction** | |
| * makes a relevant statement about hemispheric dominance, describing its main features | 2 |
| * makes some comments about hemispheric dominance | 1 |
| * supports above information with reference to relevant research | 2 |
| * refers to some research without making links to the topic | 1 |
| * writes research question/prediction as an operational hypothesis that follows on logically from the aim | 2 |
| * poses a research question/prediction | 1 |
| **Subtotal** | **6** |
| **Method** | |
| * describes participants in sufficient detail to be replicated, e.g. number, age, gender * describes the selection process | 1–2 |
| * describes materials * provides sufficient detail to be replicated | 1–2 |
| * describes the procedure, including:   + addresses anonymity   + describes the process for allocating participants to groups and roles   + describes task in sufficient detail to be replicated   + describes the collection, collation and presentation of results | 1–4 |
| **Subtotal** | **8** |
| **Results** | |
| * organises all relevant data logically in correctly labelled tables   + correctly organises table   + correctly labels table, including units, where appropriate   + includes relevant data | 1–3 |
| * presents data in a graph   + correctly graphs data   + uses appropriate labelling   + uses appropriate titles | 1–3 |
| * states results of the investigation * provides an accurate summary of the data | 1–2 |
| **Subtotal** | **8** |

|  |  |
| --- | --- |
| **Discussion and evaluation** | |
| * discusses the results of the investigation, relates the results to the hypothesis and explains how they relate to relevant psychological theories | 4 |
| * discusses the results of the research supports, comments on the hypothesis and describes relevant psychological theories | 3 |
| * describes what happened in the investigation and cites relevant psychological theories | 2 |
| * describes what happened in the investigation | 1 |
| * evaluates the investigation design:   + discusses any methodological flaws   + explains steps taken to ensure reliability and how it could be improved | 3 |
| * explains how variables were controlled and suggests ways to improve reliability | 2 |
| * states that variables need to be controlled and suggests how to improve reliability | 1 |
| * discusses ethical issues and describes how these were addressed | 2 |
| * refers to ethical issues that were considered in the investigation | 1 |
| * discusses relevance of results to the population from which the sample was drawn as well as to theory or other research referred to in the introduction | 2 |
| * suggests how the investigation might be of relevance to science or society | 1 |
| * makes accurate conclusions that relate to the hypothesis or research question | 2 |
| * forms an accurate conclusion but does not relate it to the hypothesis or research question | 1 |
| **Subtotal** | **13** |
| **References** | |
| * relevant references * Correct in-text referencing (inc. quantity) * Correct end-text referencing * listed alphabetically | 1–4 |
| **Subtotal** | **4** |
| **Appendix** | |
| * Appends data sheet | 1 |
| **Subtotal** | **1** |
| **Total** | **40** |