Unit 1 Psychology

AoS 3: Student Directed
Research Investigation

LOGBOOK

NAME: ______________________________

TEACHER: ______________________________
Task description

You are required to investigate and communicate a response to a question related to any topic we have covered in Unit 1. This will involve you investigating a research question, formulating a hypothesis, and then sourcing and analysing at least two pieces of contemporary research that address this question. You will then communicate your findings to an intended audience in a report. It can be presented in various formats. For example:

✔ A digital presentation
✔ An oral presentation
✔ A written report
✔ Or other appropriate format.

Key knowledge - What am I going to be assessed on in this task?

- **My ability to effectively communicate scientifically.** This includes the accuracy of scientific information I present; the clarity of my explanation of scientific concepts, ideas and models; the appropriateness for purpose and audience; the contextual clarity in terms of importance, authorisation and implications of findings; as well as conciseness.

- **My demonstrated understanding of the concepts specific to the investigation.** Including definitions of key terms; use of appropriate scientific language, conventions and representations; use of relevant models in organising and understanding observed phenomena and psychological concepts, and their limitations.

- **My ability to analyse the information:** This includes being able to distinguish between weak and strong evidence, and scientific and non-scientific ideas. It also includes a consideration of the validity and reliability of data, such as sources of possible errors or bias.

- **My demonstrated understanding of Ethical factors relevant to my selected question.**

**NOTE:** For authentication purposes, you must keep a record of all the work you complete in this booklet and this booklet must be submitted to your teacher, along with your report as a part of your assessment.

A table is located at the back of this booklet in order to keep track of your progress!!
<table>
<thead>
<tr>
<th>Section</th>
<th>Points to address.....</th>
<th>Check</th>
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</thead>
</table>
| Research Question      | ✓ What is your research question?  
✓ Who is the target audience for your report? (Who will you be informing?)                                                                                                                                                  |       |
| Introduction:          | ✓ Describe your research question in more detail. (Start broad and get more specific)  
✓ Consider things such as:  
  o What does your question actually mean?  
  o What do we know about the question?  
  o Who does the question impact?  
  o Why is it an important question?  
✓ What are the relevant key terms, models and theories needed to understand your research question?  
✓ Describe/define these terms.  
✓ Explain any links between these terms and how they relate to your research question.  
✓ Considering your research topic, formulate a hypothesis. Predict what you think you will find out once you have gathered evidence.  
**NOTE: ensure you record all details needed to reference any secondary sources.** |       |
| Scientific Evidence/Data | ✓ Summarise at least two pieces of contemporary research/evidence related to your research question. Ensure you include:  
  o The **aim**.  
  o A summary of the **procedures** involved.  
  o A summary of the **results (any relevant data)**.  
  o The **conclusion(s)**.  
**NOTE: Ensure that you record all of the details of the sources you use in order to reference correctly.** |       |
| Analysis:              | ✓ Discuss whether the evidence you have found supports the theory and hypothesis you formulated.  
✓ Discuss any potential limitations of the evidence. For example, any biases or problems with the procedures involved in the research.  
✓ Consider the implications of these limitations on the **validity** of the results.  
✓ Discuss whether the results have been replicated and how this may affect the **reliability** of the evidence.  
✓ Comment on the sample (for example characteristics such as age, sex or sample size) it’s effect of the sample used on the **reliability** of the evidence.  
✓ Address any ethical considerations that you think need to be accounted for in your field of research.  
✓ Distinguish if the sources you have used scientific and non-scientific ideas. |       |
| Conclusion & Generalisation | ✓ Make a concluding statement that addresses the research question.  
✓ To what extent does the evidence from your investigation answer your research question and support your hypothesis?  
✓ What recommendations could you make, for modifying or extending the investigation?  
✓ Can this conclusion be generalised? Why/why not?  
✓ Suggest any implications of your findings? |       |
NOTE: Your research question can be chosen from the suggested options listed below, or you may make up your own with guidance from your teacher.

Option 1: Biopsychology

Questions that may be explored in this investigation include:

- Are different sexes psychologically, as well as biologically, different?
- Why is the blood-brain barrier important when considering behaviour?
- How do brain structures in other animals compare with those in humans?
- How robust is left/right brain dominance theory?
- How can brain trauma in sporting injuries affect cognitive function?
- Do people use all of their brain capacity?
- How ‘plastic’ is our brain?

Option 2: Brain and use of technology

Questions that may be explored in this investigation include:

- Are ‘brain training programs’ effective?
- How does the use of technology impact on brain functioning?
- Is the use of digital devices suitable for young children?
- Is the internet changing the way we think and behave?
- How has neuroimaging changed our understanding of brain structure and function?
- How can technology be used to help people recover from brain trauma or injury?

Option 3: Psychological development

Questions that may be explored in this investigation include:

- How does learning to play a musical instrument affect brain development?
- How is pre-natal development affected by environmental factors?
- Is Piaget right?
- How do different parenting styles affect the psychological development of children?
- What are the advantages and disadvantages of play-based learning for pre-school aged children?
- What can twin studies tell us about the influence of genes and environment on development?
Option 4: Intelligence and IQ testing

Questions that may be explored in this investigation include:

- Does intelligence exist?
- Is intelligence inherited or does environment have an influence?
- Is intelligence a single ability or does it involve multiple abilities?
- Is it possible to create artificial intelligence?
- Are intelligence tests biased?
- Is emotional intelligence more important than intelligence quotient in the workplace?

Option 5: Personality

Questions that may be explored in this investigation include:

- Does personality exist?
- Are personality disorders inherited?
- How relevant is Freud to modern psychological debates on personality?
- Is the person or the situation more influential in determining a person’s behaviour?
- Is vocational testing really an assessment of personality?
- Is it possible to ‘change’ a person?

Option 6: Cognition

Questions that may be explored in this investigation include:

- What happens in the brain when we feel different emotions?
- Why are humans able to create art and invent things?
- Can creativity and imagination be fostered?
- How does the brain solve problems?
- Does extra-sensory perception exist?
- How is the brain involved in ‘self-actualisation’?
- Is critical thinking different from creative thinking?
**Step 1 – Establish your research question and your audience.**

This is the most critical part of your research investigation. You need to be clear about what it is that you would like to explore. Do you have any burning Psychology related questions that you would like to answer?

*Brainstorm potential questions below (remember they must relate to one of the options at the beginning of this booklet).*

Now choose ONE option and ONE specific question you would like to investigate!

**Which option have you chosen? Write the name and number here…..**

________________________________________________________________________

**What is your specific research question? Write it here….**

________________________________________________________________________

________________________________________________________________________

In all forms of writing or presenting you have to be aware of your intended *audience*. Knowing your audience is crucial for many reasons. It guides your writing and presentation style. There is no need to refer to your audience specifically in your investigation but it should be clear through your writing style and the development of your report who your audience is.

*Brainstorm some potential audiences below (they should be people who would be interested or might be concerned about your research question).*

________________________________________________________________________

Who is your chosen audience?  ______________________________________________
Step 2 – Identify and define/explain any relevant key terms or theories.

Approach this step by considering what is important for the audience to know about. Make sure to consider any background theory or knowledge in the area you are investigating, that you have learnt in Psychology and relay this to your audience. What do the terms you are going to use mean and how do they fit together?

List any relevant terms or theories in the box below and define/describe them. Be sure to record the details you need to reference the source(s) you have used…….

Relevant terms/theories:

Based on your understanding of the key terms/theory, formulate a **hypothesis** in relevance to your research question.

**It is predicted that**

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

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________________________________________________________________________
Step 3 – Scientific evidence/data

You must source at least two pieces of contemporary research that provide evidence related to your research question.

Be sure to include: the aim of each, a summary of the procedures and a summary of the results.

Source 1- List all of the details needed for appropriate APS referencing here……

Now describe the aim, procedure and results/conclusions of this research…. 
Source 2- List all of the details needed for appropriate APS referencing here……

Now describe the aim, procedure and results/conclusions of this research…. 
Step 4 - Analysis

Now it’s time to establish if the evidence you have gathered actually supports the theory and the hypothesis you formulated?

Comment on this here........

Now consider any potential limitations of the evidence?
Is there a possibility that it is biased, opinionated or anecdotal?
Are there any possible sources of error? Problems with the way the research was conducted?
Comment on these questions here........

Now consider the validity (it must be conducted and shared in such a way that it measures what it claims to have measured) and reliability (it can be/has been replicated by others) of the evidence you have gathered.
Comment on both here........
Research must also be conducted and shared with **integrity**. This means that all ethical considerations and standards must be adhered to in every way. Consider the relevant ethical principles and comment on whether they have been adhered to or not…

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**Distinguish** if the sources you have used include scientific or non-scientific ideas?

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**Step 5 – Conclusion and Generalisation**

What have you found out about your research question? Has you hypothesis been? Suggest any recommendations for modifying or extending your investigation in the future.
Discuss the implications of your research findings? How can the evidence you have gathered be used to benefit relevant society?

Finally, can the conclusion(s) you have drawn, be generalised to the relevant population(s) or society as a whole?

**Now compile all the information in this booklet to put your presentation together!!**
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<th>Date</th>
<th>Description of work completed</th>
<th>Teacher Signature</th>
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### Student Directed Research Investigation: Assessment Rubric

<table>
<thead>
<tr>
<th>Research Question and Hypothesis (3 Marks)</th>
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<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tr>
<td>Not Shown</td>
<td>Research question is vague/ lacks clarity. Hypothesis has little relevance to the research question and the prediction lacks accuracy.</td>
<td>Research question lacks some clarity, Hypothesis may lack relevance to the research question and/or the prediction lacks accuracy.</td>
<td>Research question is clear and concise. Hypothesis is relevant to the question and contains an accurate prediction.</td>
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<tr>
<td>Introduction (5 Marks)</td>
<td>Not Shown</td>
<td>Some definitions of key terms are innacurate or missing; minimal discussion of the relevant psychological information, ideas, concepts, theories and models; as well as minimal insight into the connections between them.</td>
<td>Some definitions of key terms are innacurate or missing; some discussion of the relevant psychological information, ideas, concepts, theories and models; as well as some insight into the connections between them.</td>
<td>Accurate definitions of key terms; thorough discussion of the relevant psychological information, ideas, concepts, theories and models; as well as insight into the connections between them.</td>
<td>Precise definitions of key terms; thorough discussion of the relevant psychological information, ideas, concepts, theories and models; as well as insight into the connections between them.</td>
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<td>Scientific evidence/Data (5 Marks)</td>
<td>Not Shown</td>
<td>Minimal summary of at least two pieces of contemporary research/evidence that may not be relevant to the research question. Some info, including the aim, procedures, the results/data and conclusion(s) may be missing.</td>
<td>Somewhat accurate summary of at least two pieces of contemporary research/evidence that may not be relevant to the research question. Some info, including the aim, procedures, the results/data and conclusion(s) may be missing.</td>
<td>Mostly accurate summary of at least two pieces of contemporary research/evidence related to the research question. Some info, including the aim, procedures, the results/data and conclusion(s) may be missing.</td>
<td>Accurate summary of at least two pieces of contemporary research/evidence related to the research question. A concise summary of the aims, procedures, results/data and conclusion(s) is included.</td>
<td>Accurate summary of at least two pieces of contemporary research/evidence related to the research question. A concise summary of the aims, procedures, results/data and conclusion(s) is included.</td>
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<td>Analysis (5 Marks)</td>
<td>Not Shown</td>
<td>Minimalevaluation of the evidence gathered that includes some discussion of potential limitations and/or biases, samples used, reliability and validity, and the distinction between scientific and non-scientific ideas.</td>
<td>Some evaluation of the evidence gathered that includes some discussion of potential limitations and/or biases, samples used, reliability and validity, and the distinction between scientific and non-scientific ideas.</td>
<td>An evaluation of the evidence gathered that includes discussion of potential limitations and/or biases, samples used, reliability and validity, and the distinction between scientific and non-scientific ideas.</td>
<td>A detailed evaluation of the evidence gathered that includes discussion of potential limitations and/or biases, samples used, reliability and validity, and the distinction between scientific and non-scientific ideas.</td>
<td>Thorough and insightful evaluation of the evidence gathered including potential limitations and/or biases, samples used, reliability and validity, and the distinction between scientific and non-scientific ideas.</td>
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<td>Ethics: (3 Marks)</td>
<td>Not Shown</td>
<td>Minimalethical factors are identified and explained; some implications of these in relevance to the selected question are discussed.</td>
<td>Most ethical factors are identified and explained; some implications of these in relevance to the selected question are discussed.</td>
<td>Accurate identification and detailed explanation of the ethical factors; implications in relevance to the selected question are discussed.</td>
<td>Precise identification and thorough explanation of the ethical factors; implications in relevance to the selected question are discussed. In detail</td>
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<td><strong>Conclusion &amp; generalisation</strong></td>
<td><strong>Not Show</strong></td>
<td>A conclusion and/or generalisation was/ were drawn, relating minimal evidence to the hypothesis and providing a response to the research question.</td>
<td>A conclusion and generalisation are both drawn, relating some evidence to the hypothesis and providing a response to the research question.</td>
<td>A valid conclusion and generalisation are both drawn, relating the evidence to the hypothesis and providing a justified response to the research question.</td>
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<td><strong>Effective science communication (3 Marks)</strong></td>
<td><strong>Not Show</strong></td>
<td>A lack of clear, coherent and concise explanations of scientific concepts, ideas and models with minimal appropriateness for purpose and audience.</td>
<td>Mostly clear, coherent and concise explanation of scientific concepts, ideas and models with some appropriateness for purpose and audience.</td>
<td>Clear, coherent and concise explanation of scientific concepts, ideas and models with appropriateness for purpose and audience.</td>
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<tr>
<td><strong>Scientific conventions and APS referencing (3 Marks)</strong></td>
<td><strong>Not Show</strong></td>
<td>Minimal use of scientific language, conventions and representations; minimal accuracy in acknowledging sources of information and using scientific referencing conventions.</td>
<td>Mostly accurate use of appropriate scientific language, conventions and representations; mostly accurate acknowledgement of sources of information and use of scientific referencing conventions.</td>
<td>Consistent and accurate use of appropriate scientific language, conventions and representations; accurate acknowledgement of sources of information and use of scientific referencing conventions.</td>
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<td><strong>Authentication and record keeping.</strong></td>
<td><strong>No records were submitted</strong></td>
<td>Minimal records have been kept, dated and submitted.</td>
<td>Records lack detail and may contain inaccuracies.</td>
<td>Regular and thorough records have been kept, dated and submitted.</td>
<td>Regular and thorough records have been kept, dated and submitted.</td>
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**Comments:**
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**Total out of 30 ____________**