**11 PSYCHOLOGY RIGHT AND LEFT HEMISPHERE RESEARCH PAPER TASK 2015**



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

Teacher: Miss Cerny Due date: 21st April 2015

**Broad context:** Human performance.

**Task type:** Response.

**Key concepts:** Brain and functions of the right and left hemispheres.

Perception.

Weber’s law and signal detection theory.

Analytical and critical thinking.

Use of evidence to support arguments and form conclusions.

**Overview:**



Figure 1

An animated silhouette of a woman has many people in a spin! The dancer (see Figure 1) which some people can see rotating clockwise and some anti-clockwise (can be accessed on the internet), is supposed to reveal if people are left-brain or right-brain dominant, making them either a creative person or a practical person. Some people can even make the woman spin in one direction and then the other at will!

The aim of the task is to use your analytical and critical thinking and psychological knowledge and understandings of the functions of the right and left hemispheres of the brain, perception and optical illusions to agree or disagree with the statement ‘The spinning woman is a reliable and valid test of right and left-brain function’.

**Task:**

The task is to write a 1000-1500 word research paper on ‘The spinning woman – left brain or right brain?’

**Hand in the following bound together neatly (name on individual sections stapled together) in this order:**

⬩ This assessment booklet.

⬩ Your typed-up final research paper.

⬩ Your hand-written or typed-up draft of your research paper proofread and checked by your teacher.

⬩ Hand-written notes on brain function, perception, illusions, analytical and critical thinking.

**What you need to do:**

1. Improve your psychological knowledge and understandings by reading Chapter 11-13 of your text book.

2. Follow the steps to writing a research paper (in psychology booklet 4).

3. Receive an identification number from your teacher. Your ID is: \_\_\_\_\_\_\_\_\_\_

4. Parent or guardian is to complete consent form to obtain permission to participate in the data-collection phase.

(Consent form due by end of week 7).

|  |  |  |  |
| --- | --- | --- | --- |
| Participant | Spin  Clockwise | Spin  anti-  clockwise | Spin both  ways |
| 1 | ✓ |  |  |
| 2 |  | ✓ |  |
| 3 |  | ✓ |  |
| 4 |  |  |  |
| 5 |  |  |  |
| 6 |  |  |  |
| 7 |  |  |  |
| 8 |  |  |  |
| 9 |  |  |  |
| 10 |  |  |  |
| Total |  |  |  |
| Mean |  |  |  |

5. Google ‘spinning silhouette optical illusion’ or ‘spinning shadow optical illusion’ on the internet.

Watch the spinning woman for 60 seconds.

6. As a class, develop a set of data – which way participants observed the woman spinning.

Record the data in a table (see Figure 2) and draw a graph.

Figure 2: example of summary data table

7. Gather the information you have found and highlight the theories and evidence that support your argument and conclusions. Record all sources of information.

8. Use the research evidence, psychological theory and the class data to determine whether the statement ‘The spinning woman is a reliable and valid test of right- and left-brain function’ has scientific merit or not.

9. Write a draft of the research paper and discuss its content with your teacher.

(Draft copy of at **least** 800 words due by end of week 8).

10. Write the final research paper.

11. Reflect on your work and complete the self-reflection page in this booklet.

12. Proofread your research paper and submit it to the teacher by the due date.

**Plagiarism:**

You must write in your own words not copy sentences word for word from another student or another source.

Plagiarising = instant zero on assignment and you will have to re-do it.

**Referencing:** psychology booklet 4 shows you have to reference correctly.

**Assessment policy:**

Have sick note/legitimate reason from parent = new negotiated due date.

Assignment not submitted on due date and no sick note from parents = -20% mark

Assignment not submitted on new negotiated due date = -40% mark

+ Letter home to parents.

+ Must attend academic completion to complete assignment.

**OR**

Submit assignment to student services before academic completion date and academic completion not necessary.

Academic completion not attended = zero on assignment + Saturday detention.

**If you know that you cannot submit your assignment on the due date, let your teacher know BEFORE the due date (email them if you are not in school) or just email them your assignment the night before and bring the hard-copy in the next day you are at school.**

**Hints:**

🞟 Search on Wikipedia and then explore the references they used, these are found at the bottom of the page. Remember you **cannot** use a Wikipedia page itself as a reference.

🞟 Become a member of the State Library of Western Australia so you can access online journals and e-books for free. There is also a wide array of resources there that you can use.

**Resources:**

The Truth About the Spinning Dancer (blog)

http://well.blogs.nytimes.com/2008/04/28/the-truth-about-the-spinning-dancer/?\_r=0

Left Brain - Right Brain and the Spinning Girl (blog)

http://theness.com/neurologicablog/index.php/left-brain-right-brain-and-the-spinning-girl/

Shows how the animation works.

http://www.randominc.net/spinninglady/

The viewing-from-above bias and the silhouette illusion

*The silhouette illusion published online a number of years ago by the Japanese Flash designer Nobuyuki Kayahara has received substantial attention from the online community. One feature that seems to make it interesting is an apparent rotational bias: Observers see it spinning more often clockwise than counter-clockwise. Here, we show that this rotational bias is in fact due to the visual system’s preference for viewpoints from above rather than from below.*

http://i-perception.perceptionweb.com/fulltext/i01/i0408.pdf

Now you see it, now you don’t: what optical illusions tell us about our brains (journal article).

Can be emailed to you

A tale of two hemispheres: psychotherapy, psychology and the divided brain (journal article).

Can be emailed to you

Left brain, right brain: facts and fantasies (journal article).

Can be emailed to you

Learning and thinking styles based on whole brain theory in relation to sensory-motor integration (journal article).

Can be emailed to you

**CONSENT FORM – YEAR 11 PSYCHOLOGY COURSE**

|  |
| --- |
| Title of study: |
| Name of teacher: |
| I \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ give permission for my son/daughter  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to participate in the psychological study being  carried out under the supervision of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ during term \_\_\_\_\_\_\_\_\_\_.  I understand that my child will remain anonymous and the individual results will be kept confidential.  Participants have the right to withdraw at any time if they find the task difficult or stressful.  Parent/caregiver’s signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Participant’s (student’s) signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**Student self-reflection**

1. Write down whether or not you had any difficulties with this work.

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2. Did you find the task easy? If so, what made it easy?

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3. Explain whether or not you need to go back over this work again.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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4. What areas would you like to go over again with your teacher?

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5. Did you use the marking key as a checklist to make sure every section was complete? 🞏 YES 🞏 NO

6. Did you have a parent/friend proofread and check your work? 🞏 YES 🞏 NO

7. Did you have your psychology teacher proofread and check your work? 🞏 YES 🞏 NO

8. 🞏 I did my best on this task OR 🞏 I could do better next time

|  |  |  |  |
| --- | --- | --- | --- |
| **Content** | **Description** |  | **Mark** |
| Title | Explains what the investigation is about in enough detail | 1 |  |
| Abstract | Very brief aim in one sentence.  Operational hypothesis.  Short description of participants used.  Short summary of results.  Short summary of the conclusion.  Statement claiming whether hypothesis was supported or not supported.  Correct structure of abstract. | 1  2  1  1  1  1  1 |  |
| Introduction | Explained background knowledge.  Past research referred to in this field.  Definitions of key terms that are referred to.  Aim statement in one sentence.  Operational hypothesis.  Independent variable.  Dependent variable.  Correct structure of introduction. | 2  1  1  1  2  1  1  1 |  |
| Method | Participants:  Details of the sample.  Number of participants used.  Ages and genders of participants.  Materials: list of items used to conduct study (mention of any question sheets or surveys used).  Procedure: includes all the steps completed in the experiment.  Correct structure of method. | 1  1  1  1  1  1 |  |
| Results | Summary sheet data table (in appendix).  Findings explained in words.  Correct structure of results.  Graph (minus 1 mark for each incorrect or missing part). | 1  2  1  5 |  |
| Discussion | Restated operational hypothesis.  Statement claiming whether hypothesis was supported or not supported.  Compare findings to those in past research discussed in intro and explain any differences in results.  Mentioned publications are cited.  Extraneous variables that could have affected the results are discussed.  Suggestions for future improvements to the research.  Short summary of the conclusion.  Discuss whether results found could be generalised to population from which sample was drawn. | 1  1  1  1  1  1  1  1 |  |
| References | Referenced according to the APA format (found in booklet 4).  Minimum of two references.  Minimum of two different sources of information.  Correct structure of reference list. | 1  1  1  1 |  |
| Appendices | Includes all individual appendices relevant to research paper.  Correct structure of appendices. | 1  1 |  |
| Presentation | Correct spelling and grammar.  In Calibri or Arial font, size 11 or 12.  1.5 line spacing.  Left and right sides of page are indented by 3cm.  Word count between 1000-1500 (not including references or appendices).  Hand-written notes are included in portfolio.  Typed or hand-written draft is included with evidence of being proofread by teacher.  Self-reflection is complete. | 1  1  1  1 1  1  1  1 |  |
| **Total mark** | | 56 |  |

Mark as percentage: %

Teacher’s comments:

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