

Acknowledgement of Country

Kaya. The School Curriculum and Standards Authority (the Authority) acknowledges that our offices are on Whadjuk Noongar boodjar and that we deliver our services on the country of many traditional custodians and language groups throughout Western Australia. The Authority acknowledges the traditional custodians throughout Western Australia and their continuing connection to land, waters and community. We offer our respect to Elders past and present.

Copyright

© School Curriculum and Standards Authority, 2022

This document – apart from any third party copyright material contained in it – may be freely copied, or communicated on an intranet, for non-commercial purposes in educational institutions, provided that the School Curriculum and Standards Authority (the Authority) is acknowledged as the copyright owner, and that the Authority's moral rights are not infringed.

Copying or communication for any other purpose can be done only within the terms of the *Copyright Act 1968* or with prior written permission of the Authority. Copying or communication of any third party copyright material can be done only within the terms of the *Copyright Act 1968* or with permission of the copyright owners.

Any content in this document that has been derived from the Australian Curriculum may be used under the terms of the <u>Creative Commons Attribution 4.0 International</u> licence.

Disclaimer

Any resources such as texts, websites and so on that may be referred to in this document are provided as examples of resources that teachers can use to support their learning programs. Their inclusion does not imply that they are mandatory or that they are the only resources relevant to the course.

Sample assessment task

Psychology – ATAR Year 11

Task 1 – Unit 1 – Biological psychology and Science inquiry

Assessment type: Science inquiry (Research)

Conditions

Part A: Research

- Two hours of class time.
- You will collate a set of notes (using key words and phrases only) and a reference list that you will submit on completion of Part B.

Part B: 50 minutes

- Supervised in class with notes allowed.
- Write detailed answers to the questions in Part B.

Task weighting

10% of the school mark for this pair of units

Part A:	(5 marks)
One page of notes (using key words and phrases only) to authenticate your work. No man awarded.	rks are
Include a reference list for all sources used for this assessment.	(5 marks)
Part B:	(23 marks)
Psychological theories have evolved over time based on collection of empirical evidence. important contribution to the historical understanding of the structure and function of th Roger Sperry (1959–1968). He investigated the role of the corpus callosum using split-bra experiments. Based on your research into the experiments of Roger Sperry, answer the q that follow:	ne brain was in
1. Describe the location, structure and function of the corpus callosum.	(3 marks)

Identify the aim of Sperry's research and explain why it was justified at the time.	(3 marks
Outline the method used by Sperry in one of his experiments. You should include the independent variable, dependent variable and details of the procedure.	(6 mark

Identify the method of selection of participants for Sperry's human experiments and outline Sperry applied this method.	
sperry applied this method.	(3 marl
	· · · · · · · · · · · · · · · · · · ·
State two findings from Sperry's experiments	(2 mar
	ι.

Marking key for sample assessment task 1– Unit 1

Part A

Provides a correctly formatted APA reference list.

(5 marks)

Description	Marks
Provides reference list	1
Subtotal	1
Includes all required information	2
Includes some required information	1
Subtotal	2
Uses correct format	2
Mostly uses correct format	1
Subtotal	2
Total	5

Part B

1. Describe the location, structure and function of the corpus callosum. (3 marks)

Description	Marks
The corpus callosum is a band of neural fibres	1
Located between the left and right hemispheres of the brain	1
That passes information between the hemispheres	1
Total	3

2. Identify the aim of Sperry's research and explain why it was justified at the time. (3 marks)

Description	Marks
Split brain research aimed to investigate the function of the corpus callosum	1
Scientists at the time were investigating brain lateralisation (1) but did not know which tasks each side of the brain was responsible for (1)	2
Total	3
Accept other relevant answers	

3. Outline the method used by Sperry in **one** of his experiments. You should include the independent variable, dependent variable and details of the procedure. (6 marks)

Description		Marks
Identifies location (1) and equipment (1)		2
Outlines procedure relevant to the selected human/animal experiment		2
Identifies procedure relevant to the selected human/animal experiment		1
	Subtotal	4
Includes independent variable		1
Includes dependent variable		1
	Subtotal	2
	Total	6
Answers may include		
Located in a laboratory		
• Used different blocks one with food under it/special light filters and pr	oiectors/differ	ent

 Used different blocks, one with food under it/special light filters and projectors/different objects/different words

• Method of exposing different images/words/food within different visual fields

• Independent and dependent variable correctly reflect the selected experiment

4

4. Identify the method of selection of participants for Sperry's human experiments and outline why Sperry applied this method. (3 marks)

Description	Marks
Sperry used convenience sampling	1
Participants had their corpus callosum severed	1
Which limited the available population due to the specific (medical) requirements for the experiment to be conducted	1
Total	3

5. State two findings from Sperry's experiments

(2 marks)

Description	Marks
States two findings from Sperry's experiments	2
States one finding from Sperry's experiments	1
Any two of:	
Hemispheres operate independently.	
Hemispheres are contralateral (left hemisphere controls right side of body/ right	
hemisphere controls left side of body).	
 Left hemisphere is linked to language skills/words/ability to speak. 	
 Image shown to right visual field and patient could describe it clearly. 	
 Right hemisphere is linked to spatial awareness/images. 	
• When presented with a word or object to the left visual field, they could select it	
from a bag but could not describe it.	
Total	2

6. Describe **two** ethical considerations relevant to Sperry's research.

(6 marks)

Description	Marks
Correctly identifies two ethical considerations relevant to Sperry's research	2
Correctly identifies one ethical consideration relevant to Sperry's research	1
Answer may include:	
 protection from harm – physical and psychological 	
informed consent	
withdrawal rights	
deception	
confidentiality	
• privacy	
voluntary participation	
debriefing	
 use of animals in research –replacement, reduction or refinement 	
Subtotal	2
Description of ethical consideration (x2)	
Provides a clear description of an ethical consideration that matches concept and is	2
linked to Sperry's research.	Z
Provides a description of an ethical consideration that matches concept and is linked to	1
Sperry's research.	T
Subtotal	4
Total	6

Sample assessment task

Psychology – ATAR Year 11

Task 2 - Unit 1 - Biological psychology and Science inquiry - short answer test

Assessment type: Response

Conditions

Time for the task: 50 minutes In class under test conditions

Task weighting

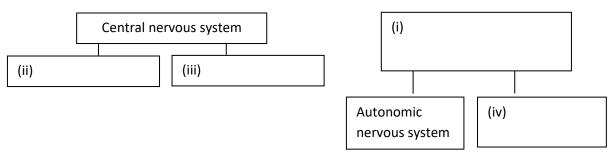
15% of the school mark for this pair of units

Question 1

(23 marks)

(a) Complete the following diagram to identify the structures of the human nervous system:

(4 marks)



Psychology researchers conducted a series of case studies to investigate the emotional effects of natural disasters on Australian adults. The researchers conducted 10 interviews using the same set of questions with adults across New South Wales, Queensland and Western Australia. The results of the research indicated that only two people thought the natural disaster had caused them emotional distress. The researchers concluded that natural disasters do not cause emotional distress for Australian adults.

 (b) (i) Complete the table below to explain the role of each branch of the autonomic nervous system in an emergency. (3 marks)

Branch	Role
Sympathetic	

6

(ii)	State why a case study is a suitable design for this type of research.	(1 mark)
(iii)	Name the type of interview used in this research.	(1 mark)
(iv)	Referring to the use of a case study, evaluate whether the researcher's conclu accurate.	sion is (5 marks)
Sha	ade the hindbrain in the following diagram:	(1 mark)
(ii)	State two functions of the cerebellum.	(2 marks)

(d) Zendi is walking home from the park and has to cross a busy road to get to his house. He is exposed to a large amount of sensory information.

Describe the location and function of the following parts of the brain as Zendi walks home.

Part of the brain	Location	Function
Reticular formation		
Primary motor cortex		
Occipital lobe		

Question 2

(27 marks)

The ability to recognise the intensity of emotions is an important social skill. Researchers from Jena University were interested in finding out whether neural activity increased more quickly when university students are exposed to emotional or neutral facial expressions.

Participants identified their responses to a series of photographs of people that showed neutral and emotional facial expressions. They used a mouse with their right hand to press a button to identify either emotional or neutral expressions. The researchers measured the speed of the responses.

(a) (i) State whether this research is experimental or non-experimental. (1 mark)

(ii)	Explain	your	answer	to	(a)(i)
------	---------	------	--------	----	--------

(b) C	Cor	nstruct a directional hypothesis related to the aim of this research. (4 mark
(c) D	Des	cribe the process of neural transmission. (4 mark
		ve participants were recruited based on recommendations from other participants in the group.
(d) (i	i)	Identify the sampling method used to select these 45 participants. (1 mar
(i	ii)	Describe one other sampling method that is likely to produce a more representative sample (2 mark

The study was approved by the Ethics Committee of the University of Jena and all participants gave informed consent prior to their participation.

(e)	(i)	Describe the role of ethics in psychological research.	(2 marks)
	(ii)	Describe two elements of informed consent.	
			(4 marks)
The	e res	searchers conducted the same test using images of emotional and neutral fa	cial expressions

The researchers conducted the same test using images of emotional and neutral facial expressions and collected data from both an EEG and fMRI.

(f) Compare the knowledge about brain function able to be obtained between an EEG and an fMRI. (6 marks)



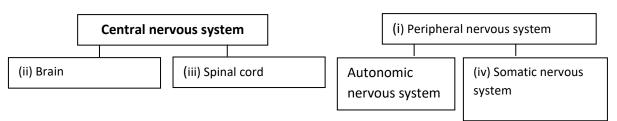
Marking key for sample assessment task 2 - Unit 1

Question 1

(24 marks)

(a) Complete the following diagram to identify the structures of the human nervous system:





(b) (i) Complete the table below to explain the role of each branch of the autonomic nervous system in an emergency. (3 marks)

Branch	Role
Sympathetic	Emergency/arousal system that activates when a threat/danger is perceived.
Parasympathetic	Returns the body to normal level of arousal (after the emergency has passed).

(ii) State why a case study is a suitable design for this type of research.

(1 mark)

(1 mark)

Description	Marks
It would be unethical to expose individuals/participants to the conditions of a natural disaster in order to study them.	1
Total	1

(iii) Name the type of interview used in this research.

 Description
 Marks

 Structured interview
 1

 Total
 1

 (v) Referring to the use of a case study, evaluate whether the researcher's conclusion is accurate.

(5 marks)

Description	Marks
The conclusion is not accurate	1
A case study is not experimental	1
Therefore, cannot establish a causal relationship	1
Case studies apply to an atypical/small/limited population	1
Which means results cannot be generalised to the (adult) population/to all adults	1
Total	5

(1 mark)



(ii) State two functions of the cerebellum.

(2 marks)

Description		Marks
Any two from the points below:		
 coordinates voluntary (muscle) movements 		
coordinates balance		
 regulates posture 		2
regulates muscle tone.		
Accept other relevant answers.		
	Total	2

(d) Describe the location and function of the following parts of the brain.

(6 marks)

Part of the brain	Location	Function
Reticular formation	Midbrain	Determines which sensory information is important/unimportant/screens sensory information to be transmitted to the cerebral cortex
Primary motor cortex	Rear/back/posterior of the frontal lobe (next to the anterior parietal lobe)	Generates neural impulses that control movement
Occipital lobe	Back/posterior of the brain	Processes visual information

Question 2

(26 marks)

(a) (i) State whether this research is experimental or non-experimental.

(1 mark)

(2 marks)

Description	Marks
Experimental	1
Total	1

(ii) Explain your answer to (a)(i)

Description	Marks
It has an independent variable (emotional or neutral facial expressions)	1
It has a dependent variable (speed of responses)	1
Accept other relevant answers.	
Total	2

Description	Marks
Population: university students	1
Independent variable: emotional/neutral facial expressions	1
Prediction: will/will not	1
Dependent variable: respond faster/slower (than those who see neutral/emotional facial expressions)	1
Total	4

(c) Describe the process of neural transmission.

Description	Marks
Signals are received by the dendrites (from the pre-synaptic neuron)	1
Transmitted from cell body/soma to the axon	1
To axon terminals that send signal across synapse	1
To dendrites of the post-synaptic neuron	1
Total	4

(d) (i) Identify the sampling method used to select these 45 participants.

Description	Marks
Snowballing	1
Total	1

(ii) Describe **one** other sampling method that is likely to produce a more representative sample. (2 marks)

Description	Marks
Describes either random or stratified sampling	2
Identifies random or stratified sampling	1
Total	2

(e) (i) State the role of ethics in psychological research.

DescriptionMarksEthics provide a set of guidelines that ensure that participants are protected from
harm (1) /research is beneficial to the population (1).2Total2

(4 marks)

(4 marks)

(1 mark)

13

(2 marks)

(4 marks)

Description	Marks
Any two:	
Nature (1) and purpose/aim (1) of the research/procedures are explained	
Any foreseeable risk of harm/adverse effects (1) /disadvantages of procedures (1)	
Participants must be legally/functionally able to provide consent (1) or it must be	
provided by a responsible adult (1)	
Participants must be advised of the right to withdraw (1) at any time without	Δ
consequence (1)	4
Provisions for confidentiality (1) and limitations to confidentiality (1)	
How information will be collected (1) and recorded (1)	
How/where (1) /how long (1) information will be stored	
Who will have access to stored (1) and reported information (1)	
Total	4

(f) Compare the knowledge about brain function able to be obtained between an EEG and an fMRI.

(6 marks)

Description	Marks
EEG measures electrical impulses/signals in the brain (1). It only measures brain activity/brainwaves/electrical activity (1) but cannot identify the location of the activity (1).	3
fMRI uses magnetic signals and radio waves/monitors blood flow and oxygen consumption (1) and provides high resolution images of brain structures/locations (1) to show how the brain is functioning/the brain's function changes during activities (1).	3
Total	6

Acknowledgments

Question 2

Müller-Bardorff, M., Bruchmann, M., Mothes-Lasch, M., Zwitserlood, P., Schlossmacher, I., Hofmann, D.,

Miltner, W., & Straube, T. (2018). Early brain responses to affective faces: a simultaneous eeg-fmri

study. Neuroimage, 178, 660–667. https://doi.org/10.1016/j.neuroimage.2018.05.081

Sample assessment task

Psychology - ATAR Year 11

Task 3 - Unit 1 - Science inquiry - Developmental Changes

Assessment type: Science inquiry (Practical)

Task weighting: 10% of the school mark for this pair of units

Conditions

Part A: Design and conduct an investigation into one aspect of developmental change at a specific stage of the lifespan. One week of class time is allocated to this part of the task.

Part B: 2 hours in class – Write a science inquiry report using the following headings:

- Formulating research
- Results
- Conclusion.

Students will be allowed to bring up to two pages of notes (not drafts), which must be submitted at the end of the assessment.

All participants in the investigation activity must provide informed consent.

Students must acknowledge sources using in-text citations and a reference list. Teachers will specify the format according to their school requirements; APA is preferred if this complies with school policies.

Students will design and conduct their investigation in groups. However, assessment is on an individual basis, i.e. production of a written report.

The graph/table, attachments (e.g. rating scales/data collection sheet) and references can be completed separately and submitted at the end of the assessment with the other written components. Students may use a spreadsheet or graphing software.

Absences or late submission are explained in the School Assessment Policy.

Mark allocation

Total marks:	50 Marks
References:	3 marks
Conclusion:	6 marks
Results:	5 marks
Formulation of resear	ch: 36 marks

Task Description

Science inquiry is at the core of psychological knowledge and understanding. This task will develop your understanding of both Lifespan psychology and Science inquiry.

To complete this task, you will need to use a design that will enable you to address all criteria for assessment as outlined below.

You will produce a written report that includes the following:

For	mulating research	36 marks)
	Describe your chosen aspect of development (physical, cognitive or social and emotio selected stage.	nal) in your (4 marks)
	Outline the aim of your research and identify its value to psychological understanding development.	s of (4 marks)
(c)	Create an inquiry question or hypothesis for your investigation.	(3 marks)
	Outline two ethical considerations relevant to your investigation. Describe how the et considerations will be managed.	hical (8 marks)
	Outline how you will select participants for your investigation and provide a reason fo method.	r this (4 marks)
(f)	Outline the method you will use in your research:	
	 (i) describe the materials and design (ii) identify two variables (iii) describe how one control variable reduces the effect/s of a confounding/extranec variable. 	(5 marks) (2 marks) ous (2 marks)
(g)	Explain the data collection method you will use in your study.	(4 marks)
Res	ults	(4 marks)
(h)	Collect your data and present it in an appropriate graph or table.	
Con	clusion	(6 marks)
(i)	Write a conclusion for your study supported by evidence from your investigation acti	vity.

References

(3 marks)

Acknowledge the sources for your information using appropriate in-text citations and providing a correctly formatted reference list at the end of the report.

Marking key for sample assessment task 3 – Unit 1

Part B: Formulating research

(a) Describe the development of your chosen aspect of development (physical, cognitive or social and emotional) in your selected stage. (4 marks)

Description	Marks
Provides an accurate and detailed description of the aspect in the specified stage of development.	4
Describes the development of a chosen aspect of development	3
Identifies the development of a chosen aspect of development	2
States an aspect of development.	1
 Answers may include, but not limited to: Language (infants) Infants use sounds and gestures to communicate (1). They begin to understand and respond to words (1). Language starts with babbling (1) then they begin to copy and put together sounds (1). First words may start at around 12 months (1). 	
Total	4

(b) Outline the aim of your research and identify its value to psychological understandings of development. (4 m)

(4 marks)

Description		Marks
Outlines the aim of the research		2
States the aim of the research		1
	Subtotal	2
Identifies the value of this research		2
Indicates the value of this research		1
	Subtotal	2
	Total	4

(c) Create an inquiry question or hypothesis for your investigation.

(3 marks)

Description	Marks
Correctly selects inquiry question or hypothesis	1
Links directly to the aim	1
Includes correct variables	1
Total	3

(d) Outline **two** ethical considerations relevant to your investigation. Describe how the ethical considerations will be managed. (8 marks)

Description		Marks
Outlining ethical considerations (x2)		
Outlines an ethical consideration relevant to the investigation		2
Identifies an ethical consideration relevant to the investigation		1
	Subtotal	4
Managing ethical considerations (x2)		
Describes how the ethical consideration will be managed in this investigation		2
Identifies how the ethical consideration will be managed in this investigation		1
	Subtotal	4
	Total	8

 (e) Outline how you will select participants for your investigation and provide a reason for this method. (4 marks)

Description		Marks
Outlines the selection of participants, including type of sample		3
Identifies the selection of participants		2
Names a selection method		1
	Subtotal	3
Provides a reason for choosing the selection method		1
	Subtotal	1
	Total	4

- (f) Outline the method you will use in your research:
 - (i) describe the materials and design
 - (ii) identify two variables
 - (iii) describe how **one** control variable reduces the effect/s of a confounding/extraneous
 variable. (9 marks)

Description	Marks	
Provides a detailed description of method for investigation, with reference to type of		
research design (e.g. experimental, non-experimental) and selection and allocation	5	
of participants		
Describes method for investigation with reference to type of research design	4	
(e.g. experimental, non-experimental) and selection and allocation of participants	4	
Outlines method for investigation with reference to type of research design	2	
(e.g. experimental, non-experimental) and selection and allocation of participants	3	
Outlines method for investigation with reference to type of research design	2	
(e.g. experimental, non-experimental) and selection or allocation of participants	2	
States method for investigation with reference to type of research design	1	
(e.g. experimental, non-experimental) or selection or allocation of participants	T	
Subtotal	5	
Identifies relevant independent variable	1	
Identifies relevant dependent variable	1	
Subtotal	2	
Describes effect of one control variable on a confounding or extraneous variable	2	
related to the investigation	Z	
Identifies effect of one control variable	1	
Subtotal	4	
Total	9	

(g) Explain the data collection method you will use in your study.

(4 marks)

Description		Marks
Correctly names type of data (quantitative, qualitative, mixed)		1
Correctly names method of data collection		1
Clearly describes the data collection method used in this investigation		2
Names the data collection method used in this investigation		1
	Total	4

Results

(h) Collect your data and present it in an appropriate graph or table. (4	1 marks)
---	----------

Description	Marks
Uses correct form of data display	1
Labels data display correctly	1
Includes correct variables in title	1
Represents data accurately in table or graph	1
Total	4

Conclusion

(i) Write a conclusion for your study supported by evidence from your investigation activity.

(6 marks)

Description	Marks
States clearly whether hypothesis or inquiry question was supported/not supported	2
States whether hypothesis or inquiry question was supported/not supported	1
Subtotal	2
Supports conclusion with a wide range of relevant evidence from the data collected	4
Supports conclusion with a range of relevant evidence from the data collected	3
Supports conclusion with some relevance from the data collected	2
Supports conclusion with brief references to evidence from the data collected	1
Subtotal	4
Total	6

References

Acknowledge the sources for your information using appropriate in-text citations and providing a correctly formatted reference list at the end of this report. (3 marks)

Description	Marks
Includes all required information	1
Consistently uses in-text citations	1
Formats references correctly	1
Total	3

Attachment 1: Informed consent letter for participants

Dear student/parent/guardian

As part of the Year 11 ATAR Psychology course, students are able to participate in a Science inquiry activity to collect data to be used in your Practical Science inquiry assessment. Details of the activity are outlined below:

Aim: To investigate developmental changes at <insert lifespan stage>.

Method: This Science inquiry requires <insert details of experimental design and procedure>.

Risks: There are no known risks to your health or wellbeing in the conduct of this Science inquiry. <Ensure that any possible risks are identified>

Privacy and Anonymity: The data will be recorded using an allocated code for each participant to protect anonymity. All raw data will be destroyed at the completion of this semester. No individual names will be published or reported.

Withdrawal: Even if you have signed this consent form, you may withdraw from the Science inquiry activity at any time without consequence. If you choose to withdraw at any time, your data will be removed from the data set to be used for the Science inquiry report.

Future use of collated data: Collated data sets collected in this task may be used in future studies with no identification of your participation at any time.

If participants are under 18: Your parent/guardian must also provide consent for your participation in the Science inquiry activity. If they agree to your participation, please ask them to sign the provided consent form. No student/person is able to participate without a completed consent form.

If participants are over 18 and capable of informed consent: Please sign the consent form provided.

If you (or your parent/guardian) would like further information or clarification, please do not hesitate to speak with or email me.

Yours sincerely

<teacher name>

Attachment 2: Informed consent form

Participant name:

Task: Science inquiry (Practical) – Lifespan Psychology

Teacher name:

I consent to participate in the activity outlined for the Science inquiry task named above. The aim of the research and procedure has been explained to me and is summarised in the information letter I have received.

I give permission for the responsible teacher, named above, to use the procedures for this Science inquiry with me.

I understand that:

- (a) I am free to withdraw from the Science inquiry at any time. There will be no consequences if I decline to participate or if I initially agree to participate, but later decide to withdraw.
- (b) The Science inquiry activity is for the purpose of teaching and learning.
- (c) The confidentiality of the information I provide will be safeguarded. All data collected from me will be identified only by a code number to ensure anonymity.
- (d) The collated and de-identified data may be maintained for future use in teaching and learning activities.
- (e) There are no known adverse effects of participating in the Science inquiry activity.
- (f) I will maintain the confidentiality of all other participants in this Science inquiry.

Please return this consent form to your teacher.

Signed: ______ Date: _____

(Student)

Students under the age of 18 must have permission from a parent/guardian to participate in this investigation.

I consent to ______ participating in the Science inquiry activity identified above.

Signed: _____ _____ Date: ______ (Parent/Guardian)