

VCE Psychology

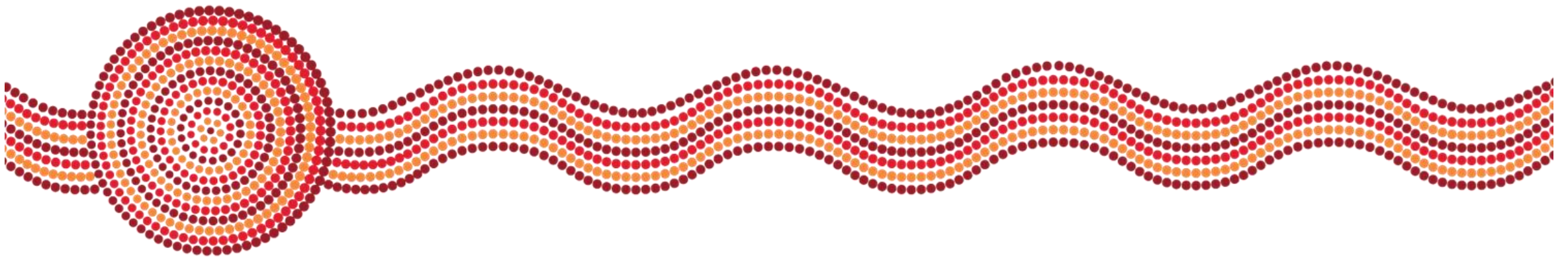
Implementation of VCE Study Design for 2023
Introduction and overview of Unit 3

2022

Acknowledgment of Country

I would like to acknowledge the traditional custodians of the many lands across Victoria on which each of you are living, learning and working. For myself, I acknowledge the Dja Dja Wurrung as the traditional custodians of the land from which I am presenting today.

I would like to pay my respects to Elders past, present and emerging, for they hold the memories, traditions, culture and hopes of all Aboriginal and Torres Strait Islander peoples across the nation.

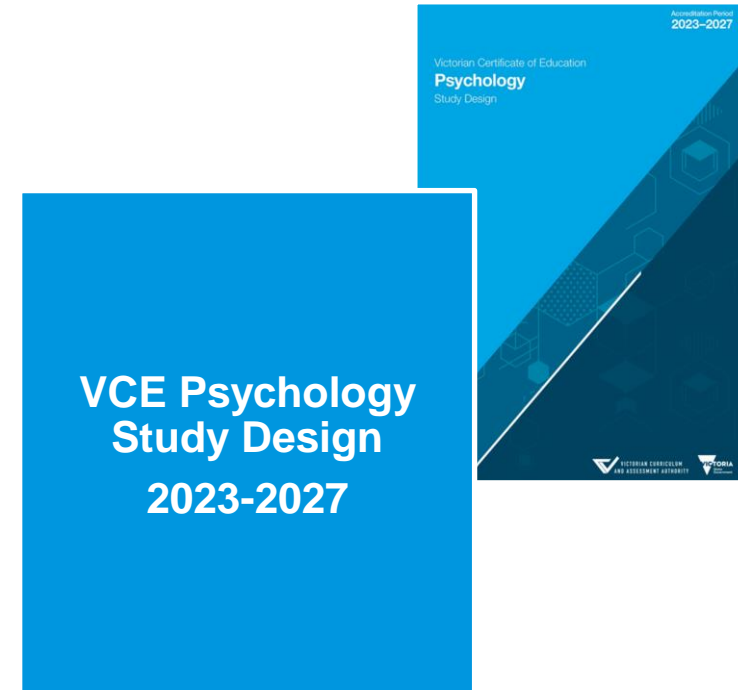
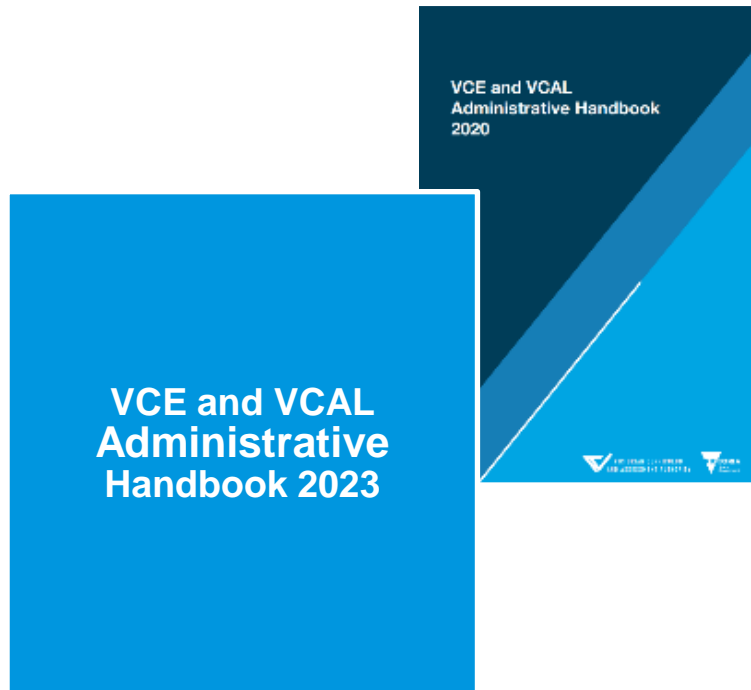




Purpose

- Overview of resources
- Introduce new features
- Assessment structure
- Familiarise with revised Unit 3 content

VCE Psychology 2023 – 2027 resources



VCE Psychology 2023 – 2027 resources

VCAA VCE
webpage

VCE

- Study designs >
- VCE examinations and reports >
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- General Achievement Test (GAT) >
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Support
materials

Home > Curriculum > VCE assessment > VCE resources and materials

VCE FREQUENTLY
ASKED QUESTIONS

View frequently asked questions about the VCE

- About VCE results and ATAR >
 - Current students >
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Examination
specifications
and sample
materials

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AND ASSESSMENT AUTHORITY

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Home > Assessment > VCE assessment > Examination specifications, past examinations and examination reports

BIOLOGY

Examination specifications and sample materials

- Examination specifications (Version 3, February 2021)
- Sample written examinations (February 2021)

VCE Psychology 2023 – 2027 Structure

Scope of study, Rationale and Aims

Cross-study specifications

Units of study

Outcomes

Key Knowledge and
Key Science Skills

Satisfactory completion
Levels of achievement

Broad aims of VCE Sciences (p.3)



Aims of VCE Psychology (p. 7)

- **develop knowledge and understanding of key psychological models, theories, concepts to describe, explain, analyse and predict human thoughts, emotions and behaviours**
- **understand and apply a biopsychosocial approach to human thoughts, emotions and behaviour**
- **apply psychological models, theories and/or concepts to everyday situations to enhance understanding of mental wellbeing**

Safety and wellbeing

Updated to include focus on:

- strengths-based and culturally safe and inclusive approaches
- supporting students health and wellbeing
- critical inquiry processes
- appropriate safety precautions and cultural responsiveness, particularly when undertaking practical investigations

Teachers need to select teaching and learning activities, practical work and scientific investigations that best suit their school and student cohorts

Safety and wellbeing

- **When developing courses, teachers must consider**
 - Duty of care in relation to health and safety of students
 - Legislative compliance; sensitivity to cultural backgrounds and personal beliefs
 - Adherence to community standards and ethical guidelines
 - Respect for persons and differences of opinions; sensitivity to students views on the use of animals in research
- **Appropriate information regarding available supports and referrals for individual health and wellbeing must be provided to students**
- **Students should not be asked to disclose personal information or be asked to provide perspectives based on personal experiences, identify and/or cultural background.**
- **Be aware of the potential for ‘othering’ and take steps to minimise it**

Ethical conduct of scientific investigations

- Teachers and schools have a legal and moral responsibility to ensure that students always demonstrate ethical conduct when participating in practical work and scientific investigations.
- Section on page 9 & 10 of study design has been updated to include:
 - the National Statement on Ethical Conduct in Human Research 2007 (Updated 2018)
 - [Ethical conduct in research with Aboriginal and Torres Strait Islander Peoples and communities: Guidelines for researchers and stakeholders](#)
 - the Australian Privacy Principles from the Privacy Amendment (Enhancing Privacy Protection) Act 2012 (Cwlth)
 - The Australian Psychological Society's *APS Code of Ethics*
 - [Australian Institute of Aboriginal and Torres Strait Islander Studies' AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research](#)
 - Prevention to Cruelty to Animals Regulations 2019
 - The Australian Code for the Care and Use of Animals for Scientific Purposes

Cross-study specifications

- **Key Science Skills**
- **Scientific Investigation**
 - Scientific investigation methodologies
 - Logbooks
- **Critical and creative thinking**
- **Ethical understanding**
- **Individual and collaborative scientific endeavour**
- **Aboriginal and Torres Strait Islander knowledge, culture and history**

Key Science Skills

- Contextualised for VCE Psychology
- Make explicit
- Opportunities to practise
- Deploy in new contexts



Key Science Skills revised

| VCE Psychology Study Design 2016–2022 | VCE Psychology Study Design 2023–2027 |
|--|--|
| Develop aim and questions, formulate hypotheses and make predictions | Develop aim and questions, formulate hypotheses and make predictions |
| Plan and undertake investigations | Plan and conduct investigations |
| Comply with safety and ethical guidelines | Comply with safety and ethical guidelines |
| Conduct investigations to collect and record data | Generate, collate and record data |
| Analyse and evaluate data, methods and scientific models | Analyse and evaluate data and investigation methods |
| Draw evidence-based conclusions | Construct evidence-based arguments and draw conclusions |
| Communicate and explain scientific ideas | Analyse, evaluate and communicate scientific ideas |

Scientific Investigation

- Opportunities for teacher-facilitated, student-adapted and student-designed investigations across Units 1 – 4
- **Scientific investigation methodologies for 2023-2027**

Study Design:

- Case study
- Classification and identification
- Controlled experiment
- Correlational study
- Fieldwork
- Literature review
- Modelling
- Product, process or system development
- Simulation

Practical work

Central component of learning and assessment.

Includes activities such as laboratory experiments, fieldwork, simulations, modelling and other direct experiences described in the scientific investigation methodologies.

A minimum of 10 hours of class time to be devoted to student practical activities and scientific investigations across Areas of Study 1 and 2 for Units 1 to 4.

A minimum of 7 hours to be devoted to Area of Study 3 in Units 1 and 2.

A minimum of 10 hours to be devoted to the student-designed investigation in Unit 4, Area of Study 3.

Logbooks

A logbook of practical activities is maintained for each of Units 1–4 for recording, authentication and assessment purposes.

The presentation format of the log book is a school decision and no specific format is prescribed. It's purposes may include:

- **providing a basis for further learning, for example, contributing to class discussions about demonstrations, activities or practical work**
- **reporting on an investigation or activity**
- **responding to questions in a practical worksheet or problem-solving exercise**
- **writing up an investigation as a formal report or as the basis of a scientific poster.**

Terms used in this study

- **New inclusion in study design, including contestable terms in the study design defined**
- **Aboriginal and Torres Strait Islander knowledge, cultures and history**
- **Data and Measurement**
- **Ethical approaches and concepts**
- **Errors, uncertainty and outliers**

Aboriginal and Torres Strait Islander Perspectives

- Australia is home to two distinct groups of Indigenous peoples. Together the phrase ‘Aboriginal and Torres Strait Islander peoples’ refers collectively to the group of peoples that live across Australia and throughout the Torres Strait.
- We speak of *peoples* to recognise that there is not a single Aboriginal and Torres Strait Islander culture or identity but many different nations, cultures and language groups.
- The [Australian Institute for Aboriginal and Torres Strait Islander Studies \(AIATSIS\)](#) map shows the major language groups and their rough geographical boundaries.

Aboriginal and Torres Strait Islander knowledge, culture and history

- **Who are the traditional custodians of your local area?**
- **What opportunities are there to engage with local Elders and/or Koorie organisations?**
- **What opportunities for learning about local perspectives will be included?**
- **What about engagement with regional, state, national and/or international perspectives?**
- **What resources will you access and/or use in your classroom?**

INFORMATION SOURCES

VAEAI - peak Koorie community organisation for education and training in Victoria. See [Protocols for Koorie Education in Victorian schools](#)

Australian Indigenous Psychologists Association

Australian Psychological Society

Culture Victoria

Indigenous Science Network

Koorie Heritage Trust

Museums Victoria

NITV

Torres Strait Islander Regional Authority

Transforming Indigenous Mental Health and Wellbeing

Victorian Aboriginal Heritage Council

Lisa Daly from [Cultural Minds](#) provides some useful advice when considering how to include Aboriginal and Torres Strait Islander perspectives in VCE Psychology, in particular noting that:

‘... It is important to understand there is a distinct difference between teaching Aboriginal culture and teaching about Aboriginal culture. It is not appropriate for a non-Aboriginal person to teach Aboriginal culture, that is the traditional or sacred knowledge and systems belonging to Aboriginal people. For these kinds of teaching and learning experiences it is essential to consult and collaborate with members of your local Aboriginal or Torres Strait Islander community.

It is appropriate, however, for a non-Aboriginal person to teach about Indigenous Australia, its history and its people in much the same way as a teacher of non-German heritage might teach about Germany, its history and its people ... As teachers, the onus is on us to learn about Indigenous Australia, in just the same way we inform ourselves about any other subject we teach ...’

Some considerations

Aboriginal and/or Torres Strait Islander students should not to be singled out to speak as ‘experts’ on Aboriginal and/or Torres Strait Islander cultures, histories or perspectives (this holds for any cultural group).

Avoid scenarios involving Aboriginal and/or Torres Strait Islander people (e.g., Jayde is an Aboriginal girl from a remote community who is boarding at a school in major city...). These kinds of scenarios will inevitably involve cultural stereotypes, and may be triggering for Aboriginal and Torres Strait Islander students. Learning activities should focus on demonstrating and applying factual knowledge of the concepts, approaches or models.

F – 10 Intercultural Capability Resources



A range of resources are available to support the delivery of Intercultural Capability and the development of students understanding in relation to cultural practices and cultural diversity

Important to remember that Aboriginal and Torres Strait Islander perspectives are distinct and separate to perspectives and experiences relating to multiculturalism and migration

Home > Curriculum > F-10 > Curriculum area resources > Intercultural Capability

TEACHING RESOURCES

The following resources have been developed to support teachers to implement the F-10 Intercultural Capability curriculum.

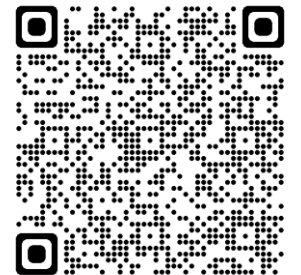
- ▶ Introduction to explicitly teaching and assessing the capabilities
- ▶ What is Intercultural Capability and how is it best taught?
- ▶ What are the key approaches and concepts?
- ▶ Links between Intercultural Capability and related learning areas
- ▶ What do teachers say about Intercultural Capability?
- ▶ How do teachers and schools navigate intercultural issues?
- ▶ How can we facilitate cultural inclusion?
- ▶ What intercultural experiences do students have at school?
- ▶ Units of work

Making visible Aboriginal Perspectives

In 2020, partnering with key stakeholders, the VCAA ran a series of webinars titled '**Making Visible: Aboriginal perspectives in the Victorian Curriculum F – 10**'

7-10 webinars provided an overview of Aboriginal perspectives across the Victorian Curriculum F – 10 as well as making visible Aboriginal perspectives in the **Aboriginal Languages curriculum, The Arts, Humanities and STEM.**

Recordings of webinars are available **on the VCAA website.**



Critical and creative thinking

- **What opportunities to develop questions and test hypotheses?**
- **What scaffolding to design and undertake questions?**
- **What opportunities to make reasoned predictions?**
- **What opportunities to evaluate knowledge? To clarify concepts and ideas?**
- **How to consider alternatives and consequences?**
- **What opportunities to make evidence-based decisions?**
- **Where to devise real or imagined solutions and solve problems?**

Ethical understanding

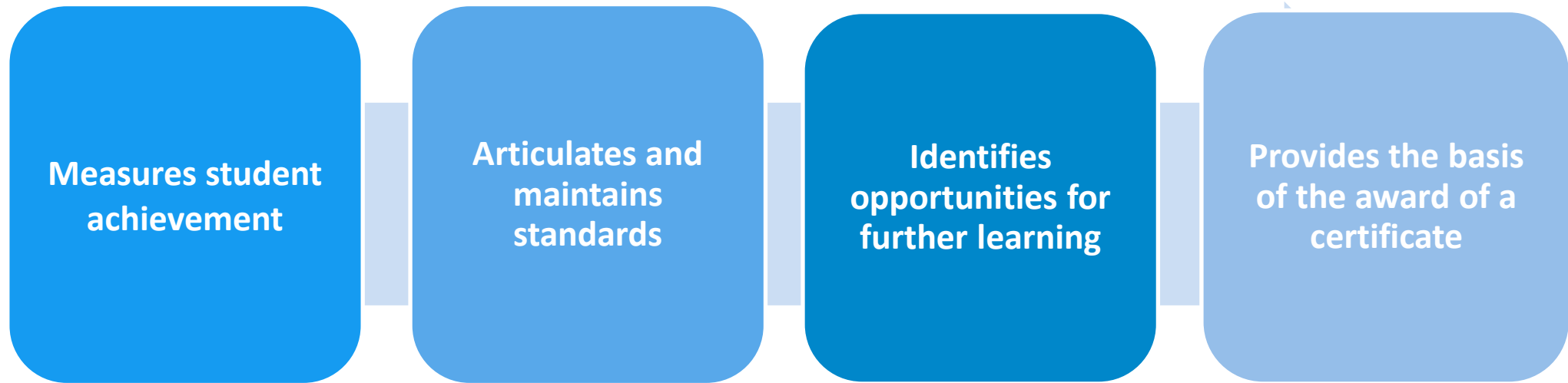
- **What opportunities to consider the implications of their own and others' investigations?**
- **What opportunities to apply integrity when recording and reporting the outcomes of their investigations?**
- **What opportunities to apply integrity when using their own and others' data?**
- **What opportunities to apply an understanding of ethical approaches and concepts to reach justified positions?**
- **What opportunities to consider values and factors that influence responsible science-related decision making?**

Individual and collective scientific endeavour

- **What opportunities to manage their time effectively?**
- **What opportunities to work safely and make responsible decisions?**
- **How to scaffold opportunities for students to work with others, to actively participate and share ideas, to complete task and solve problems?**
- **How to support students to offer view points and suggestions while respecting the perspectives of others?**
- **How to support students to seek, value and act on feedback?**

VCE assessment principles

Assessment is an integral part of teaching and learning at the senior secondary level that:



The [VCE Assessment Principles](#) state that assessment will be *valid and reasonable*, *equitable*, *balanced* and *efficient*.

Unit 3 & 4 Graded Assessment

GA1: Unit 3 School-assessed Coursework (20%)

GA2: Unit 4 School-assessed Coursework (30%)

GA3: External Examination (50%)



assessed by school



Assessed by VCAA appointed assessors

School-based Assessment

School-based assessment is an opportunity to design learning and teaching activities for a specific cohort of students, with assessment that is personalised for them.

Central to School-based assessment is understanding that teachers know their students; and know the best ways to collect evidence in terms of their achievement.

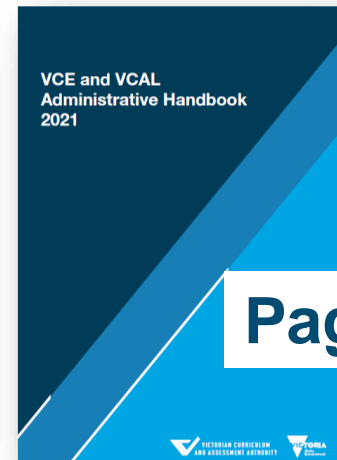
Two forms of assessment for each outcome in Unit 3 and 4:

- **Satisfactory completion of an outcome**
- **School-assessed coursework (SAC) tasks – from the list of assessment tasks on pg 36 and 43**

School-based Assessment

3 Eligibility for the award of the VCE

The VCE is awarded on the basis of satisfactory completion of units according to VCE program requirements. For VCE Units 3 and 4, evidence of achievement of outcomes is collected by the teacher through a range of tasks that are designated for the study: School-based Assessments. The decision about satisfactory completion of a unit is distinct from the assessment of levels of achievement.



Page 2

Satisfactory completion of VCE units

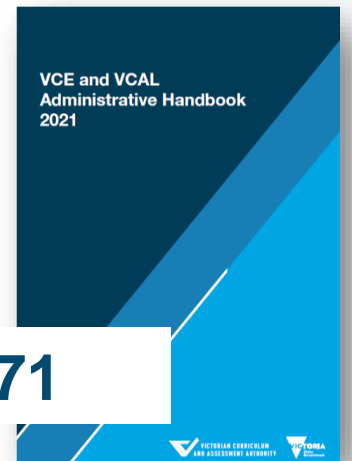
1.1 Satisfactory VCE unit result

The student will receive an S (satisfactory) for a unit if the teacher determines that the student has:

- produced work that demonstrates achievement of the outcomes
- submitted work that is clearly their own.

Decisions about satisfactory completion of a unit are solely the responsibility of the school. Results for each unit must be based on a judgment of satisfactory or non-satisfactory achievement of outcomes.

At the beginning of the academic year, schools must provide students with clear written details of both the VCAA rules and the school's rules and procedures. For all units in the VCE, schools must specify the work that a student must do to achieve an S for a unit and the conditions under which the work is to be done. More details are provided in 4.5 Integrity of VCE School-based Assessments in the *Administrative information: Schools and providers* section.



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School-based Assessment

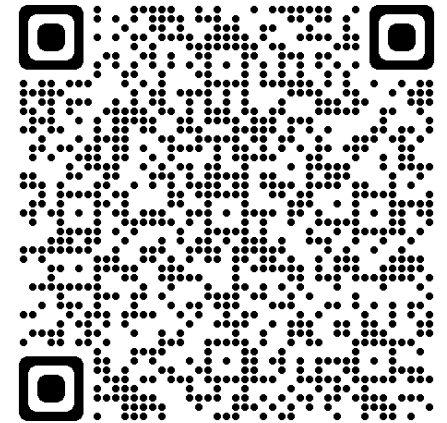
It is a school-based decision regarding the conditions and arrangements for which school-based assessments are undertaken to ensure they meet the VCE assessment principles, the study design requirements and the requirements of the VCE and VCAL Administrative Handbook.

This may vary depending between schools and sectors given their cohort, resources and unique circumstances.

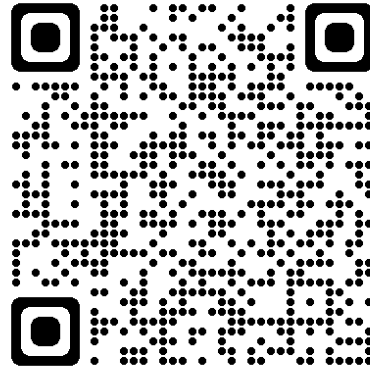
SCHOOL-BASED ASSESSMENT SUPPORT VIDEOS

The VCAA has produced a series of short videos to help VCE Coordinators and VCE teachers understand the requirements outlines in the [VCE and VCAL Administrative Handbook](#) and use the [VCE Assessment Principles](#) when developing School-based Assessment.

- [VCE School-based Assessment Audit](#)
- [Satisfactory Completion of VCE units and Scored Assessment](#)
- [Assessment and Feedback in the VCE – Part 1](#)
- [Assessment and Feedback in the VCE – Part 2](#)
- [VCE Assessment Principles](#)



2022 VCE Teacher's checklist



Supports teachers to ensure that they are implementing the key processes and practices that support the effective delivery of the VCE.

VCE teacher's checklist

This checklist will assist VCE teachers to identify key processes and practices that support the effective delivery of the VCE. The items are based on the processes and practices set out in the *VCE and VCAL Administrative Handbook* and reflect the most frequent type of queries to which the VCAA responds.

VCE study development and delivery

Teachers must provide learning experiences and assessment opportunities that are in accordance with the currently accredited VCE study designs.

| | | |
|---|--|--|
| 1 | In developing a course of study, I have: <ul style="list-style-type: none"> • used the current study design • selected a text from the current text list, where applicable • prepared a range of tasks that enable students to <ul style="list-style-type: none"> – develop the listed knowledge and skills – demonstrate the listed outcomes. | |
| 2 | Where a student has been identified as needing special provision for classroom learning and school-based assessment, I have liaised with the VCE coordinator. | |

Satisfactory completion

The decision about satisfactory completion of outcomes is based on the teacher's judgment of the student's overall performance on a combination of set work and assessment tools related to the outcomes.

| | | |
|---|---|--|
| 1 | I have explained clearly the work a student must do to achieve an S for a unit and the conditions under which the work is to be done. | |
| 2 | I separate S and N judgments from levels of achievement (scored assessment), basing the decision about satisfactory completion on my judgement of the student's overall performance on a combination of set work and assessment tools related to the outcomes. | |
| 3 | I have provided students with opportunities (including additional opportunities, where appropriate) to develop and demonstrate the key knowledge and skills required for the outcomes of the unit. | |
| 4 | Where the work submitted by the student does not demonstrate the outcome, I have considered other work, including class work, homework, additional tasks or discussions with the student, that demonstrate their understanding of the outcome, when making an informed decision on whether an outcome is met. | |
| 5 | In the case of lost or stolen work, I retain a written statement explaining the circumstances. | |
| 6 | I know the school-based process to delay satisfactory completion and apply it where appropriate. | |

Unit 3 Structure

| Unit titles | Area of Study titles |
|--|---|
| <p>Unit 3: How does experience affect behaviour and mental processes?</p> | <p>Area of Study 1: How does the nervous system enable psychological functioning?</p> <p>Area of Study 2: How do people learn and remember?</p> |

Planning template



| Provide details of the outcome, time period (Term/Week–Term/Week), key knowledge and key science skills <i>(from the study design)</i> | List and describe the learning activities that will be used to provide appropriate opportunity for students to demonstrate satisfactory achievement of the outcome (this includes practical activities, demonstrations and excursions/field work) | List and describe the assessment tasks that will be used to assess students level of achievement. Include an estimate of when each task will occur |
|--|---|--|
| Unit 1, Outcome 1: <insert outcome statement – see VCE study design> | | |
| Anticipated teaching time allocation: <insert as appropriate; e.g. Term 1 Week 1 – Term 1 Week 6> | | |
| Key knowledge: <ul style="list-style-type: none"> <Select as appropriate. See VCE study design> | Psychology Units 1–4 Key science skills: <ul style="list-style-type: none"> <Select as appropriate. See VCE study design> | <Consider a range of resources when developing appropriate learning activities; e.g. VCE Advice for Teachers located on the VCAA website: www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/psychology/advice-for-teachers/Pages/Index.aspx – ensure that any activities directly sourced from a public resource are contextualised to your school/provider’s approach> |
| | | <Select and describe as appropriate. See the VCE study design. Include an estimate of when the task will occur> |

Whilst designed specifically for schools seeking to deliver a VCE study for the first time, the [VCE Curriculum and Assessment Plans](#) are a useful tool for all teachers in planning assessment.

Explicit integration of key knowledge and key science skills

Key science skills:

- are not an ‘add on’ to the key knowledge or something to be taught as a ‘separate topic’
- may be explicit in key knowledge, or may be implicit, allowing flexibility for teachers to choose when/how to include in teaching and learning programs
- Unit 4 Area of Study 3 provides students with the opportunity to apply the key science skills - they should not be the only place students are explicitly taught key science skills

Scaffolding key science skills

- **Different schools will have different ways in which they scaffold the key science skills across Unit 3 (and 4)**
- **Schools should adjust the curriculum and assessment program to match their students needs**
- **Formative assessment is critical to understanding the prior skills that your students have entering into Unit 3 Psychology.**

One approach to teaching key science skills

Context: Students re-engaging in education, often after a gap in schooling. Previous knowledge of key science skills or psychological concepts cannot be assumed.

Approach: Plan sequencing of key science skills and teach explicitly using a structured approach (as well as integrating into practical activities and analysis of studies throughout the year).

One approach to teaching key science skills

Students are provided with a teacher created key science skills workbook. This includes summary information followed by practical activities and questions.

Each week (for around the first 12 weeks) there is a different topic to be completed.

Some work completed in class and some outside of class.

The workbook becomes a reference point to use throughout the year and helps to ensure that all the key science skills have been covered.

The skills are reinforced and build upon throughout the year through practical activities and analysis of investigations.

Unit 3, Outcome 1: How does the nervous system enable psychological functioning?

Anticipated teaching time allocation: Term 1, weeks 1-8

| Key knowledge | Key science skills | Learning Activities | Assessment Tasks |
|---|--|--|--|
| <ul style="list-style-type: none"> the roles of different subdivisions of the central and peripheral nervous systems in responding to, and processing and coordinating with, sensory stimuli received by the body to enable conscious and unconscious responses, including spinal reflexes | <ul style="list-style-type: none"> Types of research investigations Identify independent, dependent and controlled variables Formulate hypotheses Repeat experiments to ensure findings are robust Generate and record primary data Record and summarise quantitative data, including use of logbook Process quantitative data Evaluate data | <p>Annotated diagram of roles of nervous system in responding to a scenario (eg. picking up a warm drink)</p> <p>Simulation - Walk the plank game using a VR headset</p> <p>Classification – classify different activities as conscious or unconscious</p> <p>Discuss ways to test reflex responses using different types of research investigations</p> | <p>S/N assessment for evidence of satisfactory completion of outcome-</p> <p>Logbook activity – data analysis and questions related to a controlled experiment (auditory vs visual response times)</p> |
| <ul style="list-style-type: none"> the role of neurotransmitters in the transmission of neural information across a neural synapse to produce excitatory effects (as with glutamate) or inhibitory effects (as with gamma-aminobutyric acid [GABA]) as compared to neuromodulators (such as dopamine and serotonin) that have a range of effects on brain activity | <ul style="list-style-type: none"> Types of research investigations Consider ethical concepts and guidelines Analyse and explain the use of models and theories to understand concepts in psychology, identifying limitations | <p>Modelling - Role play the transmission of neural information at the synapse</p> <p>Venn diagram to compare neurotransmitters and neuromodulators</p> <p>Consider ethical concepts in regards to medical research involving changes to neuromodulator levels (eg. use of SSRI's or dopamine blockers)</p> | <p>S/N assessment for evidence of satisfactory completion of outcome-</p> <p>Annotated model of neurotransmission at the synapse compared to neuromodulators that have a broader effect on brain areas (including a statement on the limitations of the model)</p> |

| Scientific Investigation Methodology | Unit 3 Area of Study 1 Examples |
|--|--|
| Case study | Using a series of case studies differentiate between acute and chronic stress and psychological and physiological responses |
| Classification and identification | |
| Controlled experiment | Groups of students design either a controlled experiment or correlational study to test the hypothesis that fermented food improve mood. Groups share their design method with the class. Discussion regarding the usefulness, benefits and limitations of each investigation type |
| Correlational study | |
| Fieldwork | As a class create a short survey or scale that could be used to measure coping flexibility |
| Literature review | Groups of students read a different research summary on a topic (eg. Sympathetic nervous system research summaries from Science Daily). They create a summary poster of the research aims, method, findings and limitations. This is shared with the class to create a single document on key claims, conclusions and possible areas for future research |
| Modelling | Create a dramatization of neural transmission at the synapse with students playing the role of different parts of the neuron and synapse |
| Product, process or system development | Explore the use of exoskeletons controlled by a brain-machine interface to discuss the crucial role of the spinal cord and the complexity of processing and coordinating with sensory stimuli |
| Simulation | Play a walk the plank game using a VR headset and compare heart rate before and after |

| Scientific Investigation Methodology | Unit 3 Area of Study 2 Examples |
|--|--|
| Case study | Critically analyse the 'Little Albert' experiment OR analyse case studies of acquired brain damage in terms of the likely effects on memory & learning and the role of synaptic plasticity |
| Classification and identification | Students sort a range of mnemonic resources into acronyms, acrostics, method of loci or songline |
| Controlled experiment | Design and undertake an experiment to compare the effectiveness of a range of mnemonic devices |
| Correlational study | Create a correlational study to investigate the relationship between use of store loyalty cards (as a form of positive reinforcement) and consumer purchasing behaviour |
| Fieldwork | Investigate areas of Indigenous significance in your local area and take a walk (for example using the Yalinguth app) |
| Literature review | Investigate contemporary research into aphantasia |
| Modelling | Create a model of the brain highlighting the brain regions involved in memory and their functions |
| Product, process or system development | Analyse a game app in terms of existing reinforcement and punishment and suggest new additional consequences to boost play time |
| Simulation | Simulate a token economy in your classroom for a lesson |

Terminology techniques

Utilise mnemonics

eg. With **in** subjects design (testing **in** the same people)

Accuracy is **C**loseness to true value

Precision is **R**epeatability

Name it and define it

eg. Validity (a fair measure), Population (the group of research interest)

Multiple and ongoing exposures

Unit 3 Area of Study 1

On completion of this unit the student should be able to **analyse how the functioning of the human nervous system enables a person to interact with the external world, and evaluate the different ways in which stress can affect psychobiological functioning.**

To achieve this outcome students will draw on key knowledge outlines in Area of Study 1 and relevant key science skills on pages 12 and 13 of the study design.

New dot point AOS1- Neuromodulators

- **Create a table to summarise the effects of neurotransmitters and neuromodulators**
- **Create a Venn diagram to compare and contrast neurotransmitters and neuromodulators**
- **Simulation - students create neurons using pipe cleaners and create a network to demonstrate the effects of neurotransmitters and neuromodulators**
- **Simulation - create a human dramatisation of neurotransmission and neuromodulation (highlighting the differences in relative speed and longevity)**

Updated AOS1- Synaptic plasticity (sprouting, rerouting, pruning)

- **Using pipe cleaner neuron models demonstrate synaptic plasticity processes. Take photos and annotate to create a one page visual poster (or create a short video)**
- **Find an analogy (such as walking paths) to explain each process
e.g. sprouting – a pathway is being used a lot and this leads to the creation of additional walkways (new branches)**
- **Analyse case studies in terms of the likely role of synaptic plasticity**
- **Discuss - what is the role of each process in memory formation?**

New dot point AOS1- gut brain axis

- **Annotate a diagram to show the two way relationship between the gut and the brain. Create icons/characters and a story to act as a mnemonic**
- **Create a concept map to summarise the video: TedTalk: Food for thought: How your belly controls your brain**
- **Discuss – How is the gut like a forest? How is the gut like a second brain? What are the implications of the gut-brain axis for therapeutic purposes?**
- **Construct a flow chart for a controlled experiment to test hypotheses, such as: Stress changes the microbiota of the gut in animals & kombucha improves mental health**
- **Analyse the Smiles Trial by the Food and Mood Centre**

Unit 3 Area of Study 2

On completion of this unit the student should be able to apply **different approaches to explain learning to familiar and novel contexts** and discuss **memory as a psychobiological process.**

To achieve this outcome students will draw on key knowledge outlines in Area of Study 2 and relevant key science skills on pages 12 and 14 of the study design.

New dot point AOS2- Aboriginal & Torres Strait Islander approaches to learning

- If available, invite a local Koorie Elder to discuss kinship relationships and relationships to Country to understand how Aboriginal approaches to knowledge and learning are patterned on Country
- Engage with stories available at [Aboriginal Culture - Culture Victoria \(cv.vic.gov.au\)](http://cv.vic.gov.au) to explore how Country is a system that encodes knowledge transmitted through relationships and expressed through modalities including song, dance, art, and objects.
- If available, participate in an activity delivered on Country, such as [Indigenous walking tour in the Dandenongs - Melbourne | Wurundjeri \(wurundjericulturaltours.com.au\)](http://wurundjericulturaltours.com.au) to understand how Country is a system that encodes knowledge
- Use a [yarning circle](#) as a learning tool to enrich and promote shared discussions about Aboriginal and Torres Strait Islander ways of knowing

AOS2- Updated brain areas

- **Explore the Queensland Brain Institute website for information and resources**
- **Create a model of the brain highlighting the regions involved in memory. Create a mnemonic for each region linked to function**
- **Use a Venn diagram to contrast long-term implicit and explicit memories, including the role of brain areas**
- **Provide case studies of memory dysfunction and identify the brain area/s most likely affected**

AOS2- Alzheimers' and aphantasia

- **Carry out online research to find brain imaging pictures of Alzheimer's disease vs healthy brains. Annotate the images to highlight the differences and potential consequences in the experience of mental imagery**
- **Have the class participate in a guided visualisation session and then rate their ability to vividly picture the prompts following the exercise; collate and summarise the data**
- **Using a website such as The Conversation or Science Daily find an example of contemporary research into aphantasia. Create a flow chart to summarise the method & main findings.**

New dot point AOS2- Mnemonics

- Apply the method of loci to tell the story of a piece of information making its way through the Atkinson-Shiffrin model
- Plan/carry out controlled experiments to compare the effectiveness of mnemonic devices in memory retrieval
- Using the resource <https://songlines.nma.gov.au/>, investigate the songline of the Seven Sisters and explain how it increased encoding, storage and retrieval of information for Indigenous Australians

Formative vs summative assessment

- How will you know where your students are 'at' in terms of satisfactory completion of an outcome?
- How will you identify student strengths/weaknesses in key knowledge/skills?
- How will you determine what do your students know and what can they do?
- How will you determine what your students don't know and what they can't they do?
- How will you teach and assess to address any issues?
- How can feedback be provided to students about their progress in VCE studies?
- How can SAC tasks be formative as well as summative assessments?

One approach-Formative vs summative assessment

How will you know where your students are 'at' in terms of satisfactory completion of an outcome?

- At the beginning of each outcome I will have students stick an AOS Completion checklist in their logbook (outlining required S/N tasks and SAC type).
- At various times throughout AOS I will collect logbooks to check progress and provide feedback.

How will you identify student strengths/weaknesses in key knowledge/skills?

- Checking logbooks (which cover a range of key knowledge and key science skills)
- Regular 'Quick 5 quizzes' at the beginning of a class (consisting of a few cloze activities or MCQ and 2-3 short answer questions to answer in 5 minutes). I collect, mark and hand back to students at the beginning of the next class.
- Class discussions and questioning of students one-on-one
- Monitoring of textbook online programs

How can feedback be provided to students about their progress in VCE studies?

- Through logbook activities, quick 5 quizzes, one-on-one check in sessions

List of SAC options for Unit 3

- analysis and evaluation of at least one psychological case study, experiment, model or simulation
- analysis and evaluation of generated primary and/or collated secondary data
- comparison and evaluation of psychological concepts, methodologies and methods, and findings from three student practical activities
- analysis and comparison of two or more contemporary media texts.

One task per outcome

50-70 minutes in length for a written response, 10 minutes for a multimodal or oral response

SAC possibilities for AOS1

| Task type | Possible contexts |
|--|---|
| <ul style="list-style-type: none"> analysis and evaluation of at least one psychological case study, experiment, model or simulation | <ul style="list-style-type: none"> Create and evaluate a physical model and/or simulation that demonstrates the transmission of neural information at the synapse during particular activities Provide students with selected case studies related to stress and evaluate the usefulness of using different models of stress to explain experiences/responses |
| <ul style="list-style-type: none"> analysis and evaluation of generated primary and/or collated secondary data | <ul style="list-style-type: none"> Generate primary data via a fieldwork survey on sources of stress and coping mechanisms in family members Conduct a controlled experiment into reaction times and compare data generated to collated secondary data from previous research |
| <ul style="list-style-type: none"> comparison and evaluation of psychological concepts, methodologies and methods, and findings from three student practical activities | <ul style="list-style-type: none"> Modelling activity – construct a physical model that demonstrates role of glutamate and GABA in the transmission of neural information Correlational study - Consumption of ‘superfoods’ and stress levels Product development – Adapt and improve a product to designed to support individuals to cope with stress |
| <ul style="list-style-type: none"> analysis and comparison of two or more contemporary media texts. | <ul style="list-style-type: none"> Analyse and compare a newspaper article or infographic about a gut health product with a summary of a controlled experiment on the same product Analyse and compare a podcast and a fact sheet about stress responses and strategies for coping with stress Provide students with an abstract of a research paper and newspaper article relating to the GBA and ask them to develop an infographic that communicates the key elements of both texts |

SAC possibilities for AOS2

| Task type | Possible contexts |
|--|---|
| <ul style="list-style-type: none"> analysis and evaluation of at least one psychological case study, experiment, model or simulation | <ul style="list-style-type: none"> Analyse a research study into the use of sung narrative as a memory technique Analyse classic experiments to demonstrate evaluate the effectiveness of behaviourist approaches to learning Analyse, evaluate and compare case studies investigating Alzhiemer’s disease and aphantasia |
| <ul style="list-style-type: none"> analysis and evaluation of generated primary and/or collated secondary data | <ul style="list-style-type: none"> Carry out class-based controlled experiments to compare the effectiveness of two different mnemonic devices Analyse and evaluate secondary data in the form of brain imaging and post-mortem studies of brain lesions in people with Alzheimer’s disease |
| <ul style="list-style-type: none"> comparison and evaluation of psychological concepts, methodologies and methods, and findings from three student practical activities | <ul style="list-style-type: none"> Modelling – create and evaluate a 3D model that locates brain areas involved in memory. Case study – conduct an investigation into prominence of aphantasia in selected individuals Product, process or system development – Develop a product or process that supports people living with injuries to brain areas associated with memory |
| <ul style="list-style-type: none"> analysis and comparison of two or more contemporary media texts. | <ul style="list-style-type: none"> Select two media texts that relate Alzheimer’s research – analyse and compare investigation techniques and findings Select a range of media texts (newspaper articles, infographics, twitter posts) that link to an contemporary issue related to the psychobiological process of memory. Present a range of opinions in relation to the selected issue and ask students to compare and analyse each position to reach a justified position. |

Hints for developing School-assessed Coursework (SAC) tasks

- **minimise reading, or provide stimulus prior to completing the task**
- **stimulus, if included, must be used in the response**
- **place easier items earlier in the task where possible**
- **use a range of assessment items (use a taxonomy e.g SOLO or Blooms to ensure a spread of responses)**
- **make sure the typical student at your school can finish the SAC task in the time available**
- **Minimise non-attempts on items where possible**

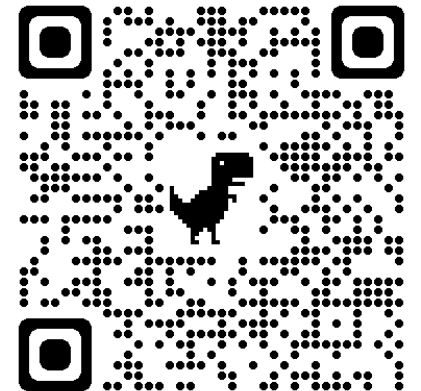
Hints for using media texts as stimulus material for SAC tasks

Ask yourself the following questions:

- Are the media texts at an appropriate literacy/reading level?
- Do I need to edit the media texts?
- Will I give my students the media texts prior to the SAC task?
- Which key knowledge do the media texts target?
- Which key science skills do the media texts target?
- Do I need further materials to supplement the media texts as part of the SAC task?

VCE resources

- **Administrative information for School-based Assessment**
- **VCAA Bulletin and Notices to schools**
- **School calendar and assessment policy**
- **Statistical moderation reports**
- **School-based assessment audit reports**
- **School-based assessment coursework reports**
- **Examination reports**
- **The school teaching and learning program**



Questions?

Contact

Erin Wilson

Curriculum Manager, STEM



03 9059 5157



erin.wilson@education.vic.gov.au



www.vcaa.vic.edu.au



vcaa.vce.curriculum@education.vic.gov.au