



Psychology

Victorian Certificate of Education Study Design

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Latoya BARTON
The sunset (detail)
from a series of twenty-four
9.0 x 9.0 cm each, oil on board



Tarkan ERTURK
Visage (detail)
201.0 x 170.0 cm
synthetic polymer paint, on cotton duck



Liana RASCHILLA
Teapot from the *Crazy Alice* set
19.0 x 22.0 x 22.0 cm
earthenware, clear glaze, lustres



Nigel BROWN
Untitled physics (detail)
90.0 x 440.0 x 70.0 cm
composition board, steel, loudspeakers,
CD player, amplifier, glass



Kate WOOLLEY
Sarah (detail)
76.0 x 101.5 cm, oil on canvas



Chris ELLIS
Tranquility (detail)
35.0 x 22.5 cm
gelatin silver photograph



Christian HART
Within without (detail)
digital film, 6 minutes



Kristian LUCAS
Me, myself, I and you (detail)
56.0 x 102.0 cm
oil on canvas



Merryn ALLEN
Japanese illusions (detail)
centre back: 74.0 cm, waist (flat): 42.0 cm
polyester cotton



Ping (Irene) VINCENT
Boxes (detail)
colour photograph



James ATKINS
Light cascades (detail)
three works, 32.0 x 32.0 x 5.0 cm each
glass, fluorescent light, metal



Tim JOINER
14 seconds (detail)
digital film, 1.30 minutes



Lucy McNAMARA
Precariously (detail)
156.0 x 61.0 x 61.0 cm
painted wood, oil paint, egg shells, glue, stainless steel wire

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Psychology

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IMPORTANT INFORMATION

Accreditation period

Units 1 and 2: 2005–2009

Units 3 and 4: 2005–2010

The accreditation period commences on 1 January 2005.

Other sources of information

The *VCAA Bulletin* is the only official source of changes to regulations and accredited studies. The *VCAA Bulletin*, including supplements, also regularly includes advice on VCE studies. It is the responsibility of each VCE teacher to refer to each issue of the *VCAA Bulletin*. The *VCAA Bulletin* is sent in hard copy to all VCE providers. It is available on the Victorian Curriculum and Assessment Authority's website at www.vcaa.vic.edu.au

To assist teachers in assessing school-assessed coursework in Units 3 and 4, the Victorian Curriculum and Assessment Authority publishes an assessment handbook that includes advice on the assessment tasks and performance descriptors for assessment.

The current year's *VCE and VCAL Administrative Handbook* contains essential information on assessment and other procedures.

VCE providers

Throughout this study design the term 'school' is intended to include both schools and other VCE providers.

Photocopying

VCE schools only may photocopy parts of this study design for use by teachers.

Introduction

RATIONALE

Psychology is the study of the nature and development of mind and behaviour in both humans and animals, including the biological structures and processes that underpin and sustain both. Students can develop an understanding of themselves and their relationships with others and their society through the study of psychology.

This study aims to engage students in the study of human behaviour from biological, cognitive and social perspectives. Students are introduced to the variety of thinking and research approaches used in psychology and gain a broad perspective of the study as a science. Students apply the principles of scientific research to investigations of psychology. They propose and investigate hypotheses, collect and analyse data and draw conclusions, taking account of limitations. They relate inferences to current models and theories, and recognise the contribution to psychology of earlier models and theories. Students incorporate ethical principles in their research and identify and analyse research methods and their ethical implications.

This study design will assist teachers to implement a curriculum that is engaging and challenging to a wide range of students, including those who are aiming for careers in psychological research and practice, business and social work.

AIMS

This study is designed to enable students to:

- develop an understanding of the diversity of applications, language, methods and major ideas of psychology;
- understand the ways that biological, cognitive and social perspectives are used to organise and extend knowledge in psychology;
- develop skills in the conduct of empirical research including data collection, analysis and critical evaluation of conclusions;
- interpret results in terms of models and theories;

- identify and assess the reliability and validity of research methods and their related ethical considerations;
- understand current issues and theories in psychology;
- communicate effectively the results of their research.

STRUCTURE

The study is made up of four units. Each unit deals with specific content and is designed to enable students to achieve a set of outcomes. Each outcome is described in terms of key knowledge and skills.

ENTRY

There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Students who enter the study at Unit 3 should be willing to undertake some supplementary background study as specified by their teacher.

Units 1 to 4 are designed to a standard equivalent to the final two years of secondary education. All VCE studies are benchmarked against comparable national and international curriculum.

DURATION

Each unit involves at least 50 hours of scheduled classroom instruction.

CHANGES TO THE STUDY DESIGN

During its period of accreditation minor changes to the study will be notified in the *VCAA Bulletin*. The *VCAA Bulletin* is the only source of changes to regulations and accredited studies and it is the responsibility of each VCE teacher to monitor changes or advice about VCE studies published in the *VCAA Bulletin*.

COMMUNITY STANDARDS

It is the responsibility of the school to ensure that all activities in this study are conducted within ethical guidelines.

Teachers should be familiar with the *National Statement on Ethical Conduct in Research Involving Humans* (NHMRC, 2001), in particular:

- Respect for persons: voluntary consent; the right of participants to withdraw from the research at any time without reprisals or consequences; the protection of specific vulnerable groups.
- Beneficence: research must be designed to maximise any benefits to participants and society; that participants must be protected from any possible harm – psychological, emotional and physical – that may arise during the research process.
- Justice: the right of participants to fair treatment and access to the social benefits of research.

Teachers should also be familiar with the *National Privacy Principles* (NPPs), in particular:

- informed consent: including
 - consent from vulnerable persons: disabled, non-readers, non-English speaking participants, children
 - participant’s and experimenter’s responsibilities;
- privacy: right not to disclose, right not to have personal details exposed;
- debriefing;
- professional conduct including power and responsibilities.

MONITORING FOR QUALITY

As part of ongoing monitoring and quality assurance, the Victorian Curriculum and Assessment Authority will periodically undertake an audit of Psychology to ensure the study is being taught and assessed as accredited. The details of the audit procedures and requirements are published annually in the *VCE and VCAL Administrative Handbook*. Schools will be notified during the teaching year of schools and studies to be audited and the required material for submission.

SAFETY

It is the responsibility of the school to ensure that duty of care is exercised in relation to the health and safety of all students undertaking the study.

USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY

In designing courses for this study teachers should incorporate information and communications technology where appropriate and applicable to the teaching and learning activities. The Advice for Teachers section provides specific examples of how information and communications technology can be used in this study.

KEY COMPETENCIES AND EMPLOYABILITY SKILLS

This study offers a number of opportunities for students to develop key competencies and employability skills. The Advice for Teachers section provides specific examples of how students can demonstrate key competencies during learning activities and assessment tasks.

LEGISLATIVE COMPLIANCE

When collecting and using information, the provisions of privacy and copyright legislation, such as the Victorian *Information Privacy Act 2000* and *Health Records Act 2001*, and the federal *Privacy Act 1988* and *Copyright Act 1968* must be met.

Assessment and reporting

SATISFACTORY COMPLETION

The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's performance on assessment tasks designated for the unit. Designated assessment tasks are provided in the details for each unit. The Victorian Curriculum and Assessment Authority publishes an assessment handbook that includes advice on the assessment tasks and performance descriptors for assessment for Units 3 and 4.

Teachers must develop courses that provide opportunities for students to demonstrate achievement of outcomes. Examples of learning activities are provided in the Advice for Teachers section.

Schools will report a result for each unit to the Victorian Curriculum and Assessment Authority as S (Satisfactory) or N (Not Satisfactory).

Completion of a unit will be reported on the Statement of Results issued by the Victorian Curriculum and Assessment Authority as S (Satisfactory) or N (Not Satisfactory). Schools may report additional information on levels of achievement.

AUTHENTICATION

Work related to the outcomes will be accepted only if the teacher can attest that, to the best of their knowledge, all unacknowledged work is the student's own. Teachers need to refer to the current year's *VCE and VCAL Administrative Handbook* for authentication procedures.

LEVELS OF ACHIEVEMENT

Units 1 and 2

Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision. Assessment of levels of achievement for these units will not be reported to the Victorian Curriculum and Assessment Authority. Schools may choose to report levels of achievement using grades, descriptive statements or other indicators.

Units 3 and 4

The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4.

In the study of Psychology the student's level of achievement will be determined by school-assessed coursework, a mid-year examination and an end-of-year examination. The Victorian Curriculum and Assessment Authority will report the student's level of performance on each assessment component as a grade from A+ to E or UG (ungraded). To receive a study score, students must achieve two or more graded assessments and receive S for both Units 3 and 4. The study score is reported on a scale of 0–50. It is a measure of how well the student performed in relation to all others who took the study. Teachers should refer to the current year's *VCE and VCAL Administrative Handbook* for details on graded assessment and calculation of the study score. Percentage contributions to the study score in Psychology are as follows:

- Unit 3 school-assessed coursework: 17 per cent
- Unit 4 school-assessed coursework: 17 per cent
- Mid-year examination: 33 per cent
- End-of-year examination: 33 per cent

Details of the assessment program are described in the sections on Units 3 and 4 in this study design.

Unit 1

This unit introduces students to the scientific study of psychology as the investigation into human behaviour and the mental processes that determine it; including perception, cognition and emotion. Students learn about the use of theories, models and controlled observations to describe and explain human behaviour.

The focus of this unit is an introduction to the scientific foundation of psychology. In this context, human behaviour is examined in social situations where certain behaviours are seen to be a consequence of environmental processes. Individual development of cognitive and perceptual abilities is also explored.

Research methods and their associated critiques are integrated within the different methodological approaches to psychology. The link between the aspect of psychology being studied and the choice of research method is established. Students apply these methods to different studies and make simple evaluations of the appropriateness of each model. An introduction to ethical principles in the conduct of psychological research and practice is provided.

AREA OF STUDY 1

Introduction to psychology

This area of study introduces the nature and scope of psychology as a scientific discipline. Students learn about the processes involved in psychological research, the evidence-based nature of findings in psychology, and ethical principles in the practice and conduct of psychology and psychological research.

Outcome 1

On completion of this unit the student should be able to explain how the field of psychology provides scientific explanations of behaviour with particular principles, procedures and approaches to data.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 1.

Key knowledge

This knowledge includes

- the systematic study of behaviour and mental processes, including perception, cognition and emotion;
- the distinction between psychology and psychiatry and the diverse fields of psychology as a discipline and a profession;
- the historical development of psychology, for example, Wilhelm Wundt, William James, Hermann Ebbinghaus, Alfred Binet, John B Watson;
- steps involved in psychological research: identification of the research problem, formulation of a hypothesis, designing the method, collecting, analysing and interpreting the data and reporting research;
- reliability and validity in psychological research;
- independent and dependent variables;
- ethical principles in the conduct of psychological research: including the role of the experimenter, protection and security of participant's rights, confidentiality, voluntary participation, withdrawal rights, informed consent procedures, deception in research, debriefing, professional conduct.

Key skills

These skills include the ability to

- recognise the importance of reliability and validity in empirical evidence used in psychological research;
- use examples from research studies to identify and explain the differences between independent and dependent variables;
- describe ethical principles applied to the conduct of research;
- describe the research methods involved in psychological research.

AREA OF STUDY 2

Social relationships

This area of study focuses on behaviour as a consequence of environmental experiences. Examples of pro-social and anti-social behaviour and factors influencing their occurrence are investigated as well as the influence of groups on individual behaviour. Research methods and ethical principles employed in psychological studies are incorporated into the area of study.

Outcome 2

On completion of this unit the student should be able to identify the characteristics of pro-social and anti-social behaviour and evaluate the factors that influence them.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 2.

Key knowledge

This knowledge includes

- characteristics of pro-social and anti-social behaviour; for example, helping behaviour, bullying and harassment;
- factors influencing pro-social behaviour; for example, situational (bystander intervention and effect), social norms–reciprocity principle, social responsibility norm, personal (empathy, mood, competence), altruism;

- factors influencing reluctance to help; for example, diffusion of responsibility, audience inhibition, social influence, cost-benefit analysis;
- ways in which a group may influence others to change their behaviour; for example, peer pressure, risk-taking behaviour;
- effects of status and power within groups; for example, Zimbardo (1970);
- factors affecting conformity; for example, normative influence and culture, informational influence, unanimity and group size as illustrated in conformity experiments, for example, Asch (1951, 1956), Smith and Bond (1998);

OR

factors affecting obedience; for example, social proximity, legitimacy of authority figures and group pressure as illustrated in Milgram (1963) or Kilham and Mann (1974);

- qualitative and quantitative data, scales of measurement (nominal, ordinal, interval, ratio);
- descriptive and inferential statistics in the study of social behaviour, including line graphs, box and whiskers plots, scatter plots, histograms and frequency distributions (polygons);
- ethical principles related to studies of conformity or obedience.

Key skills

These skills include the ability to

- identify factors influencing pro-social or anti-social behaviour;
- use evidence to explain when conformity or obedience is likely to occur;
- collect quantitative data and use it to determine mean, median and mode;
- use and interpret graphical representations of data in psychological research.

AREA OF STUDY 3

Development of individual behaviour

This area of study focuses on the development of perceptual and cognitive abilities. Piaget's theory of cognitive development is considered, together with recent research findings. The development of social cognition and the changes that occur in human being's understanding of themselves as they age is covered.

Outcome 3

On completion of this unit the student should be able to outline the key developmental stages in perception, cognition and understanding of self, and describe the main developmental theories in these areas.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 3.

Key knowledge

This knowledge includes

- research methods used to study early perceptual skills; for example, preferential looking and habituation/dishabituation;
- infants' visual perceptual abilities using the study of Gibson and Walk (1960), and a more recent study; for example, Campos and associates (1992);

- implications of sample size and population on research conclusions;
- Piaget's four-stage theory of cognitive development, including the process of assimilation and accommodation, together with key cognitive accomplishments at each stage;
- Piaget's theory in light of recent research findings;
- variations in self-esteem as a function of age and gender differences;
- relationship between motor, perceptual, cognitive and social development.

Key skills

These skills include the ability to

- compare one historical with one recent research method used to study the development of perception;
- identify factors that influence self esteem;
- use secondary data to explain the effects of sample size on research conclusions in studies of human development.

ASSESSMENT

The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's overall performance on assessment tasks designated for the unit.

The key knowledge and skills listed for each outcome should be used as a guide to course design and the development of learning activities. The key knowledge and skills do not constitute a checklist and such an approach is not necessary or desirable for determining the achievement of outcomes. The elements of key knowledge and skills should not be assessed separately.

Assessment tasks must be a part of the regular teaching and learning program and must not unduly add to the workload associated with that program. They must be completed mainly in class and within a limited timeframe. Teachers should select a variety of assessment tasks for their assessment program to reflect the key knowledge and skills being assessed and to provide for different learning styles.

For this unit students are required to demonstrate achievement of three outcomes. As a set these outcomes encompass all areas of study.

Demonstration of achievement of Outcomes 1, 2 and 3 must be based on the student's performance on a selection of assessment tasks. Where teachers allow students to choose between tasks they must ensure that the tasks they set are of comparable scope and demand. Assessment tasks for this unit are:

- essay;
- annotated poster;
- multimedia presentation;
- empirical research activity;
- test – short answer and extended response;
- summary of research findings in at least two related studies.

Unit 2

In this unit students learn about different methods and models that describe and explain human behaviour.

This unit focuses on internal physical, chemical and biological processes that inform behaviour. This context is based on the understanding of neuronal structures and the nervous system at the basic level.

Methods of studying the differences in behaviour between people are evaluated.

The study of individual behaviour in social situations is explored where behaviours can be influenced by attitudes resulting from environmental influences. Measurement tools applied to studies of attitude are investigated.

Research methods continue to be integrated within the different approaches to psychology. Students apply these methods to different studies and evaluate the appropriateness of each model.

Ethical principles in the conduct of psychological research and practice are included.

AREA OF STUDY 1

Introduction to neurons and nervous system

This area of study focuses on the structure and role of neurons and the nervous system in the transmission of information. The connections between neurotransmitters, neuromodulators and disease are also explored. Research methods and ethical principles employed in psychological studies are incorporated into the area of study.

Outcome 1

On completion of this unit the student should be able to explain the roles of the neurons, synapses, neurotransmitters and neuromodulators, and describe the functions of the central nervous system.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 1.

Key knowledge

This knowledge includes

- model of the nervous system, including central nervous system (brain, spinal cord) and peripheral system;
- structure and function of sensory neurons, interneurons, motor neurons in the reception and transmission of information throughout the body;
- process of neural impulse transmission, including the mechanism, action potential and the direction of transmission along the axon;
- role of neurotransmitters and neuromodulators in this process;
- major functions of the spinal cord: to pass sensory information from the peripheral nervous system to the brain, to transmit information from the brain to the peripheral nervous system and to the spinal reflex;
- role of the somatic nervous system and the role of the autonomic nervous system (ANS);
- interference to the functions of the nervous system;
- ethical principles associated with psychological studies of the nervous system.

Key skills

These skills include the ability to

- identify and describe the functions of the spinal cord;
- explain the mechanism of transmission of neural impulses along neurons;
- contrast the functions of sensory, interneuron and motor neurons;
- compare the role of the somatic and autonomic nervous system (ANS);
- illustrate the links between neurotransmitters and neuromodulators in at least one disease affecting the nervous system; for example, Parkinson's disease, motor neuron disease;
- discuss the research design methods and ethical principles of psychological studies of the nervous system.

AREA OF STUDY 2

Individual differences

This area of study focuses on scientific ways of describing and measuring 'normality' and individual differences. Methods of psychological assessment are evaluated. Research methods and the ethical principles employed in psychological studies are incorporated into this area of study.

Outcome 2

On completion of this unit the student should be able to analyse the strengths and limitations in scientific approaches to defining 'normality' and in the application of psychological assessment in this area.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 2.

Key knowledge

This knowledge includes

- definitions of ‘normality’ including, sociocultural, functional, historical, situational, medical and statistical;
- definitions of ‘abnormality’: societal and functional approaches;
- strengths and limitations of tests of individual differences;
- statistical measures of ‘normality’ and ‘abnormality’, such as variance and standard deviation;
- frequency distributions to measure central tendency;
- one approach to describing and measuring intelligence selected from Binet (general intelligence), Cattell (fluid and crystallised intelligence), Weschler (empirical model of intelligence), Sternberg (hierarchical model of intelligence) or Gardner (multiple intelligences);

OR

one approach to describing and classifying personality: Freud (psychoanalytic), empirical (type A, B and C), Eysenck (trait), Rogers (humanistic), Skinner (learning);

OR

one approach to assessing and classifying mental health; for example, anxiety disorders;

- ethical principles in testing for individual differences.

Key skills

These skills include the ability to

- describe the strengths and limitations of definitions of normality and abnormality;
- use variance and standard deviation to describe normality and abnormality, with reference to either intelligence or personality tests;
- use primary or secondary data to construct frequency distributions in order to measure central tendency showing bimodal, symmetric (bell-shaped and normal), skew (positive and negative);
- evaluate the ethical principles related to the use of intelligence or personality tests.

AREA OF STUDY 3

Social attitudes

This area of study examines how attitudes are formed, changed and measured. For the purposes of this study attitudes are defined as ideas about ourselves, others, objects and experiences. The relationship between attitudes and prejudice is considered. Correlation techniques are applied to a student-designed questionnaire. Research methods and the ethical principles employed in psychological studies are incorporated into this area of study.

Outcome 3

On completion of this unit the student should be able to describe attitude formation and factors that affect prejudice.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 3.

Key knowledge

This knowledge includes

- components of an attitude in terms of: thoughts (cognitive), feelings (affective) and actions (behavioural);
- factors which may reduce prejudice: inter-group contact (sustained contact, mutual interdependence, equality), cognitive interventions and super-ordinate goals;
- social and cultural differences and prejudice; for example, gender, race and age;
- qualitative and quantitative methods used to measure attitudes, including: observation of behaviour, self-reports and Likert scales;
- statistical significance of correlation based on strength and size of the sample;
- ethical principles appropriate to conducting questionnaires.

Key skills

These skills include the ability to

- explain factors contributing to the development of prejudice;
- evaluate qualitative and quantitative methods used to measure attitudes;
- use appropriate ethical standards in the design of a briefing statement and consent form used to gather primary data;
- use correlation to analyse the results gathered from a student-designed questionnaire.

ASSESSMENT

The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's overall performance on assessment tasks designated for the unit.

The key knowledge and skills listed for each outcome should be used as a guide to course design and the development of learning activities. The key knowledge and skills do not constitute a checklist and such an approach is not necessary or desirable for determining the achievement of outcomes. The elements of key knowledge and skills should not be assessed separately.

Assessment tasks must be a part of the regular teaching and learning program and must not unduly add to the workload associated with that program. They must be completed mainly in class and within a limited timeframe. Teachers should select a variety of assessment tasks for their assessment program to reflect the key knowledge and skills being assessed and to provide for different learning styles.

For this unit students are required to demonstrate achievement of three outcomes. As a set these outcomes encompass all areas of study.

Demonstration of achievement of Outcomes 1, 2 and 3 must be based on the student's performance on a selection of assessment tasks. Where teachers allow students to choose between tasks they must ensure that the tasks they set are of comparable scope and demand. Assessment tasks for this unit are:

- essay;
- annotated poster;
- multimedia presentation;
- empirical research activity;
- test – short answer and extended response;
- summary of research findings from two or more related studies.

Unit 3

This unit focuses on the brain and the nervous system as a whole structure and investigates their role in affecting human behaviour. Brain research methods are examined and different approaches of psychology are integrated in a study of visual perception and states of consciousness. These approaches are used to explain behaviour in terms of internal physical and biological processes.

Research methods are integrated within the different approaches to psychology and students learn to make evaluations of the appropriateness of each model. Research studies are used to illustrate the application of statistical measures to the development of models and theories of psychology. Consideration of ethical principles in the conduct of psychological research and practice is included.

AREA OF STUDY 1

Brain and nervous system

This area of study focuses on the main functions of the brain and nervous system and the role of those functions in determining behaviour. Cognitive and behavioural functions of the right and left cerebral hemispheres are investigated. The purposes and limitations of brain research methods are explored.

Outcome 1

On completion of this unit the student should be able to explain the major functions of the brain including cortical lobes and hemispheric specialisation, and the role of the nervous system, and evaluate the strengths and limitations of brain research methods.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 1.

Key knowledge

This knowledge includes

- structure of the cerebral cortex: cerebral hemispheres, corpus callosum;
- functions of the four lobes of the cerebral cortex in the control of motor somatosensory, visual and auditory processing in humans: frontal lobe (including Broca's area), parietal lobe, occipital lobe, and temporal lobe (including Wernicke's area);
- hemispheric specialisation: the cognitive and behavioural functions of the right and left hemispheres of the cerebral cortex, non-verbal versus verbal and analytical functions, findings of research on intact brains;

- brain research methods and their value and limitations including case studies, brain stimulation, brain recording and imaging techniques, including electroencephalograph (EEG), computerised tomography (CT), positron emission tomography (PET), magnetic resonance imaging (MRI), functional magnetic resonance imaging (fMRI);
- divisions of the nervous system: central nervous system, peripheral nervous system (somatic and autonomic);
- roles of the sympathetic and para-sympathetic divisions of the ANS;
- the physiological systems involved in arousal (fight-flight response), uses and limitations of the polygraph;
- physiological and psychological effects of prolonged or intense arousal, the relationship between stress and disease, the general adaptation syndrome;
- ethical principles in the conduct of brain research.

Key skills

These skills include the ability to

- explain the functions of the four lobes of the brain (frontal, temporal, parietal and occipital);
- distinguish between the role of the right and left cerebral hemispheres;
- analyse data from brain research to establish their value and limitations of the methods;
- compare the roles of the para-sympathetic and sympathetic nervous systems;
- evaluate the evidence for the relationship between stress and disease;
- investigate the use, protection and security of participant confidentiality, voluntary participation and informed consent in psychological research.

AREA OF STUDY 2

Visual perception

This area of study focuses on the visual system and how information is transmitted and perceived as an example of brain function. The characteristics of the visual perceptual system, its organisation and the effects of past experience on perception are investigated.

Outcome 2

On completion of this unit the student should be able to explain the nature of processes involved in visual perception.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 2.

Key knowledge

This knowledge includes

- characteristics of the visual perceptual system: the interactive nature of processes of the retina and the brain in reception, transduction, transmission, selection, organisation and interpretation of stimulus information;
- response to light and the concept of thresholds, absolute and differential (just noticeable difference);
- organisation in visual perception as evidenced in art, signs and symbols: Gestalt principles (figure-ground, closure, similarity, proximity), depth perception (binocular – retinal disparity, convergence, monocular – accommodation, pictorial cues, linear perspective, interposition, texture gradients, relative size and height in the visual field), visual constancies (size, shape, brightness, orientation);

- the effect of context and past experience on perception through perceptual set;
- distortions of visual perception by illusions, including Muller Lyer and Ames room;
- research methods in visual perception, including use of participant selection, random and stratified sampling, participant allocation; control and experimental groups;
- ethical principles in the conduct of psychological research.

Key skills

These skills include the ability to

- explain the distinction between absolute and differential thresholds;
- use evidence to explain the principles of visual perception;
- explain visual illusions as distortions of visual perception;
- explain the strengths and limitations of random and stratified sampling;
- design a research investigation to demonstrate the use of participant selection and allocation, and control and experimental groups.

AREA OF STUDY 3

States of consciousness

This area of study focuses on states of consciousness and explores relationships between consciousness and thoughts, feelings and behaviour. It examines the difficulties and limitations in the measurement of states of consciousness.

Outcome 3

On completion of this unit the student should be able to compare and contrast characteristics of normal waking consciousness with altered states of consciousness.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 3.

Key knowledge

This knowledge includes

- consciousness as the awareness of objects and events in the external world and the subject's own existence and activities;
- concepts of normal waking consciousness and altered states of consciousness, in terms of attention, awareness, content limitations, controlled and automatic processes, perceptual and cognitive distortions, emotional awareness, self-control, time orientation;
- measurement of physiological responses which can indicate different states of consciousness, including electrical activity of the brain and other physiological responses, including heart rate, body temperature and galvanic skin response;
- methods used to study sleep electroencephalogram (EEG), electromyograph (EMG), electro-oculogram (EOG eye movements);
- characteristics and patterns of sleep: rapid eye movement (REM sleep), non-rapid eye movement (NREM) sleep;
- psychological and physical effects of sleep deprivation;
- sleep phenomena, including insomnia, hypersomnia, sleep apnea, nightmares, night terrors, sleep walking, sleep talking;

- research designs used to minimise the effects of extraneous variables, including repeated measures design, matched-participants design, independent-groups design;
- placebo effects, experimenter effects, single blind and double blind procedures;
- ethical principles in the conduct of psychological research related to sleep.

Key skills

These skills include the ability to

- compare methods used to measure levels of awareness;
- use EEG measurements to identify the characteristics and significance of each stage of sleep;
- identify and describe sleep phenomena from given characteristics;
- explain ways to minimise extraneous variables in experiments.

ASSESSMENT

The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's overall performance on assessment tasks designated for the unit. The Victorian Curriculum and Assessment Authority publishes an assessment handbook that includes advice on the assessment tasks and performance descriptors for assessment.

The key knowledge and skills listed for each outcome should be used as a guide to course design and the development of learning activities. The key knowledge and skills do not constitute a checklist and such an approach is not necessary or desirable for determining the achievement of outcomes. The elements of key knowledge and skills should not be assessed separately.

For this unit students are required to demonstrate achievement of three outcomes. As a set these outcomes encompass all areas of study.

Assessment of levels of achievement

The student's level of achievement in Unit 3 will be determined by school-assessed coursework and a mid-year examination.

Contribution to final assessment

School-assessed coursework for Unit 3 will contribute 17 per cent to the study score.

The level of achievement for Unit 3 is also assessed by a mid-year examination, which will contribute 33 per cent to the study score.

School-assessed coursework

Teachers will provide to the Victorian Curriculum and Assessment Authority a score representing an assessment of the student's level of achievement.

The score must be based on the teacher's rating of performance of each student on the tasks set out in the following table and in accordance with an assessment handbook published by the Victorian Curriculum and Assessment Authority. The assessment handbook also includes advice on the assessment tasks and performance descriptors for assessment.

Assessment tasks must be a part of the regular teaching and learning program and must not unduly add to the workload associated with that program. They must be completed mainly in class and within a limited timeframe. Where optional assessment tasks are used, teachers must ensure that they

are comparable in scope and demand. Teachers should select a variety of assessment tasks for their program to reflect the key knowledge and skills being assessed and to provide for different learning styles.

Outcomes	Marks allocated*	Assessment tasks
<p>Outcome 1 Explain the major functions of the brain including cortical lobes and hemispheric specialisation, and the role of the nervous system, and evaluate the strengths and limitations of brain research methods.</p>	40	<p>At least three different tasks selected from the following:</p> <ul style="list-style-type: none"> • essay • empirical research activity • annotated poster • multimedia presentation • summary and evaluation of data and methods from two or more related studies • test (multiple choice, short-answer and extended response).
<p>Outcome 2 Explain the nature of processes involved in visual perception.</p>	30	
<p>Outcome 3 Compare and contrast characteristics of normal waking consciousness with altered states of consciousness.</p>	30	
Total marks	100	

*School-assessed coursework for Unit 3 contributes 17 per cent to the study score.

Mid-year examination

Description

All outcomes in Unit 3 will be examined.

The examination will assess a representative sample of the key knowledge and skills that underpin Outcomes 1, 2 and 3 of the unit.

Format

The examination will be divided into two sections; a multiple-choice section and a short-answer/extended response section. Each section will contribute 50 per cent to the examination. The examination will reflect the weightings of the outcomes in the study design.

Conditions

The examination will be completed under the following conditions:

- Duration: one and a half hours.
- Date: mid-year, on a date to be published annually by the Victorian Curriculum and Assessment Authority.
- Victorian Curriculum and Assessment Authority examination rules will apply. Details of these rules are published annually in the *VCE and VCAL Administrative Handbook*.
- The examination will be marked by a panel appointed by the Victorian Curriculum and Assessment Authority.

Contribution to final assessment

The examination will contribute 33 per cent to the study score.

Unit 4

In this unit students study cognitive psychological methods through the concepts of memory and learning. The concept of behaviour is understood in terms of mental processing of information.

Research methods continue to be integrated within the different methodological approaches to psychology. Students apply these methods to different studies and make evaluations of the appropriateness of each model. Research studies are used to illustrate the application of statistical procedures to the development of models and theories of psychology. The application and understanding of ethical principles in the conduct of psychological research and practice is extended as students complete a research investigation.

AREA OF STUDY 1

Memory

This area of study explores the characteristics of memory as a cognitive process. The information processing model of memory is explored, including the key components of encoding, retrieval and forgetting.

Outcome 1

On completion of this unit the student should be able to use the information processing model of memory to describe different ways in which memory is expressed and compare theories of memory.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 1.

Key knowledge

This knowledge includes

- encoding, storage and retrieval;
- measures of retention: recall, recognition, re-learning and the relative sensitivity of each measure;
- relationship between, and properties of, sensory memory (iconic and echoic, short-term memory and long-term memory);
- short-term memory capacity, effects of rehearsal (maintenance and elaboration), chunking, consolidation theory;
- working memory;

- long-term memory types (procedural, declarative, episodic, semantic) and organisation of information in long-term memory (as illustrated by semantic network theory);
- serial position effect;
- theories of forgetting (retrieval failure theory, interference theory, motivated forgetting, decay);
- the features of the forgetting curve as (the contribution of anterograde and retrograde interference effects in recall);
- organic causes of forgetting (amnesia both anterograde and retrograde);
- memory decline over the life span;
- memory enhancement through quality of encoding (organisation) and the use of context dependent cues, state dependent cues and mnemonic devices (narrative chaining and method of loci);
- formation of operational hypotheses and interpretation of p values;
- ethical principles in the conduct of psychological research related to memory.

Key skills

These skills include the ability to

- distinguish between the properties of sensory, short-term, working and long-term memory;
- compare the relative sensitivity of measures of retention;
- graph and interpret the forgetting curve;
- use the information processing theory of memory to explain anterograde and retrograde amnesia;
- investigate procedures enhancing retrieval and improving memory;
- develop an operational hypothesis related to a memory task explaining the selection of a test for significance with probability levels ($p < 0.01$ and $p < 0.05$).

AREA OF STUDY 2

Learning

This area of study explores the characteristics of learning as a process that plays a part in determining behaviour. Three types of learning are examined: classical conditioning, operant conditioning and observational learning. Behaviour not dependent on learning is also explored.

Students compare and contrast evidence about classical and operant learning and observational learning.

Outcome 2

On completion of this outcome the student should be able to compare and contrast theories of learning, including: classical and operant learning, observational learning, and behaviours not dependent on learning.

To achieve this outcome the student will draw on knowledge and related skills outlined in area of study 2.

Key knowledge

This knowledge includes

- behaviours not dependent on learning (reflex action, fixed action patterns and behaviours due to maturation);
- classical conditioning (Pavlov's original experiments, conditioned stimulus, unconditioned stimulus, conditioned response, unconditioned response; processes of acquisition, extinction stimulus generalisation, stimulus discrimination and spontaneous recovery);
- one-trial learning with reference to taste aversion;
- trial and error learning, including Thorndike's puzzle-box experiment;
- operant conditioning, including Skinner's original experiments (the Skinner box) and processes of acquisition, extinction, stimulus generalisation, stimulus discrimination, spontaneous recovery;
- ethical issues in conditioning behaviour including Watson's 'little Albert' experiment;
- comparison of classical and operant conditioning, role of learner, timing of stimulus and response, nature of response (reflexive/voluntary);
- observational learning (modelling) processes: attention, retention, reproduction, motivation, reinforcement; Bandura's experiments with observational learning in children;
- 'learning set' and its influence on future learning.

Key skills

These skills include the ability to

- explain the differences between reflex actions, fixed action patterns, and behaviours due to maturation;
- contrast classical and operant conditioning;
- distinguish one trial learning from classical conditioning;
- investigate the influence of 'learning set' on future learning.

AREA OF STUDY 3

Research investigation

This area of study focuses on the use of empirical research in psychology. Such research is crucial in developing theories and understanding of human behaviours and development.

Outcome 3

On completion of this unit the student should be able to report on a research investigation that included the formulation of a hypothesis, application of a research method, use of an ethical framework and the collection, analysis and interpretation of data.

Key knowledge

This knowledge includes

- formation of operational hypotheses;
- research design methods;
- ethical considerations;
- collection and interpretation of data;
- statistical analysis;
- reporting of findings and conclusions.

Key skills

These skills include the ability to

- develop a hypothesis;
- select and apply an appropriate research method;
- apply appropriate ethical principles in the conduct of psychological research;
- collect and analyse data;
- apply appropriate statistical measures;
- report findings and conclusions.

ASSESSMENT

The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's overall performance on assessment tasks designated for the unit. The Victorian Curriculum and Assessment Authority publishes an assessment handbook that includes advice on the assessment tasks and performance descriptors for assessment.

The key knowledge and skills listed for each outcome should be used as a guide to course design and the development of learning activities. The key knowledge and skills do not constitute a checklist and such an approach is not necessary or desirable for determining the achievement of outcomes. The elements of key knowledge and skills should not be assessed separately.

For this unit students are required to demonstrate achievement of three outcomes. As a set these outcomes encompass all areas of study.

Assessment of levels of achievement

The student's level of achievement for Unit 4 will be determined by school-assessed coursework and an end-of-year examination.

Contribution to final assessment

School-assessed coursework for Unit 4 will contribute 17 per cent to the study score.

The level of achievement for Unit 4 is also assessed by an end-of-year examination, which will contribute 33 per cent to the study score.

School-assessed coursework

Teachers will provide to the Victorian Curriculum and Assessment Authority a score representing an assessment of the student's level of achievement.

The score must be based on the teacher's rating of performance of each student on the tasks set out in the following table and in accordance with an assessment handbook published by the Victorian Curriculum and Assessment Authority. The assessment handbook also includes advice on the assessment tasks and performance descriptors for assessment.

Assessment tasks must be a part of the regular teaching and learning program and must not unduly add to the workload associated with that program. They must be completed mainly in class and within a limited timeframe. Where optional assessment tasks are used, teachers must ensure that they are comparable in scope and demand. Teachers should select a variety of assessment tasks for their program to reflect the key knowledge and skills being assessed and to provide for different learning styles.

Outcomes	Marks allocated*	Assessment tasks
<p>Outcome 1 Use the information processing model of memory to describe different ways in which memory is expressed and compare theories of memory.</p>	40	<p>At least two tasks selected from the following:</p> <ul style="list-style-type: none"> • essay • empirical research activity • annotated poster • multimedia presentation • summary and evaluation of data and methods from three or more related studies test (multiple choice, short answer, extended response) <p>AND</p> <ul style="list-style-type: none"> • a report on a research investigation relating to either Outcome 1 or 2.
<p>Outcome 2 Compare and contrast theories of learning including: classical and operant learning observational learning, and behaviours not dependent on learning.</p>	40	
<p>Outcome 3 Report on a research investigation that included the formulation of a hypothesis, application of a research method, use of an ethical framework and the collection, analysis and interpretation of data.</p>	20	
Total marks	100	

*School-assessed coursework for Unit 4 contributes 17 per cent to the study score.

End-of-year examination

Description

All outcomes in Unit 4 will be examined.

The examination will assess a representative sample of the key knowledge and skills that underpin Outcomes 1, 2 and 3 of the unit.

Format

The examination will be divided into two sections; a multiple-choice section and a short-answer/extended response section. Each section will contribute 50 per cent to the examination. The examination will reflect the weightings of the outcomes in the study design.

All questions are compulsory.

Students will complete the examination using a structured answer booklet.

The examination will be set by a panel appointed by the Victorian Curriculum and Assessment Authority.

Conditions

The examination will be completed under the following conditions:

- Duration: one and a half hours.
- Date: end-of-year, on a date to be published annually by the Victorian Curriculum and Assessment Authority.
- Victorian Curriculum and Assessment Authority examination rules will apply. Details of these rules are published annually in the *VCE and VCAL Administrative Handbook*.
- The examination will be marked by a panel appointed by the Victorian Curriculum and Assessment Authority.

Contribution to final assessment

The examination will contribute 33 per cent to the study score.

Advice for teachers

DEVELOPING A COURSE

A course outlines the nature and sequence of teaching and learning necessary for students to demonstrate achievement of the set of outcomes for a unit. The areas of study broadly describe the learning context and the knowledge required for the demonstration of each outcome. Outcomes are introduced by summary statements and are followed by the key knowledge and skills which relate to the outcomes.

Teachers must develop courses that include appropriate learning activities to enable students to develop the knowledge and skills identified in the outcome statements in each unit.

For Units 1 and 2, teachers must select assessment tasks from the list provided. Tasks should provide a variety and the mix of tasks should reflect the fact that different types of tasks suit different knowledge and skills and different learning styles. Tasks do not have to be lengthy to make a decision about student demonstration of achievement of an outcome.

In Units 3 and 4, assessment is more structured. For some outcomes, or aspects of an outcome, the assessment tasks are prescribed. The contribution that each outcome makes to the total score for school-assessed coursework is also stipulated.

USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY


In designing courses and developing learning activities for Psychology, teachers should make use of applications of information and communications technology and new learning technologies, such as computer-based learning, multimedia and the World Wide Web, where appropriate and applicable to teaching and learning activities.

KEY COMPETENCIES AND EMPLOYABILITY SKILLS

Students undertaking the following types of assessment, in addition to demonstrating their understanding and mastery of the content of the study, typically demonstrate the following key competencies and employability skills.

Assessment task	Key competencies and employability skills
Oral presentation	Communication of ideas, information and data
Conducting survey/questionnaire	Planning and organisation
Data analysis	Using mathematical ideas and techniques to organise and interpret data
Model building	Problem solving
Multimedia presentation	Using information and communications technology to collect, organise, analyse and display data
Empirical research activity	Teamwork; self-management; initiative/innovation
Test	Summarising and interpreting information
Essay	Summarising and interpreting information

LEARNING ACTIVITIES

Examples of learning activities for each unit are provided in the following sections. Examples highlighted by a shaded box are explained in detail in accompanying boxes. The examples that make use of information and communications technology are identified by this icon .

Unit 1

AREA OF STUDY 1: Introduction to psychology

Outcome 1


Explain how the field of psychology provides scientific explanations of behaviour with particular principles, procedures and approaches to data.

Examples of learning activities

through exercises, identify the nature of psychology as a science through its methodology, understanding how the steps in scientific research are applied in psychological experiments

assess a non-scientific theory by identifying the absence of elements that would deem it scientific

working in small groups, take a psychological specialisation and make a presentation indicating the types of skills required, instruments used, strategies, clientele and likely work environment

 visit the websites of The Royal Australian and New Zealand College of Psychiatrists, the Victorian Psychologists' Registration Board, The Australian Psychological Society and the Australian Skeptics' Society and consider viewpoints on the scientific nature of psychology

identify the key scientific components and ethical principles in an example of psychological research, e.g. Milgram's 'obedience to authority' studies

discuss the ethical concerns in a piece of psychological research, e.g. Zimbardo et al. 'Stanford University Prison' experiment

from specific well-known pieces of research, e.g. Miligram, Asch, Sherif identify the differences between independent and dependent variables and steps in the research design

identify particular ethical issues relating to research involving children; debate why 'Informed Consent' from the guardian is secondary to 'No psychological or physiological harm to participants' in ethical considerations

interview five people working in the areas of psychology and psychiatry, and report on findings

Detailed example

PSYCHOLOGY AND PSYCHIATRY

In the broader community many people are unaware of the difference between these two professions, indeed psychologists are often asked whether their services can be bulk-billed to Medicare, when in fact they will only be refundable from a private health fund's 'extras healthcover'.

The following short survey both introduces standardised procedure and provides some data for a preliminary exercise in reporting.

Procedure

Each student is required to interview five people to gather information on their knowledge in the area of psychology and psychiatry and report their findings.

Approach the respondent and say:

'Good morning/afternoon/evening, I am a student of VCE Psychology and I wonder if you would help me by answering a few short questions?'

If the respondent says 'No', say 'That's alright, thank-you for your time.'

Otherwise, proceed, and write the responses in the spaces provided.

Respondent No. Sex

Estimate the approximate age of the respondent.

- Older Adult
- Middle Age
- Younger Adult
- Secondary School
- Primary School

What kind of difficulties do psychiatrists help with?

What kind of difficulties do psychologists help with?

How do you become a psychologist?

How do you become a psychiatrist?

For each of the following activities, indicate whether a **psychologist** or a **psychiatrist** or **both** would be likely to carry them out:

- counselling a depressed adult
- giving medication to a depressed adult
- running an anger management group
- assessing the intelligence of a child
- performing an 'Ink Blot' test of personality
- assessing suitability of job applicants
- negotiating with hijackers
- performing corrective surgery on the brain
- training personal coaches.


AREA OF STUDY 2: Social relationships

Outcome 2


Identify the characteristics of pro-social and anti-social behaviour and evaluate the factors that influence them.


Examples of learning activities

investigate hierarchies that exist in human and other animal groups


 working in groups of about four, conduct a websearch using the key-word 'bullying'; select and analyse one program designed to help deal with bullying either at school or in the workforce, present this to the class in the form of a role-play to show how the program would work

participate in a class activity on styles of leadership; record and analyse the data, and compare with literature on this issue

 search for 'Stanley Milgram' on the Internet and consider the ethical issues highlighted by his research

 search for 'Solomon Asch' on the Internet and consider the effect of group size on tendency to conform


present a set of psychological data in a histogram and frequency distribution table, and calculate the measures of central tendency

 collect class data on a characteristic such as height and use a spreadsheet to examine mean, median and mode to create tables and line-graphs

draw and analyse a sociogram

analyse school classes in terms of Blake and Mouton's 'Managerial Grid' or, more simply, in Lewin's 'styles of leadership' model

identify sources of power in terms of legitimate, reward, coercive; expert, information and referent power

 use a word-processing package to create a table comparing increasing group sizes and decreasing group sizes for the following factors: stress, creativity, conformity, cooperation, status

complete a group activity relating to cooperation and competition, e.g. the 'Prisoner's Dilemma' game; analyse the outcomes and the influence of cooperation and competition on the results

Detailed example**THE PRISONER'S DILEMMA GAME**

The aim is for the students to first maximise the number of tokens they have as individuals and secondly maximise the number of tokens for their pair. Each student is issued with ten small tokens. Students are to select a playing partner and then pairs are randomly allocated into groups of four.

A 'Reward' schedule is written on the board:

4 x X – lose 1 each

3 x X – win 1 each

1 x Y – lose 3

2 x X – lose 2

2 x Y – win 2

1 x X – win 3

3 x Y – lose 1 each

4 x Y – win 1 each

Students are given the instructions: For each of 10 rounds, you must write either X or Y on your piece of paper. In each round, you can discuss

with your partner what you will do, and on rounds 5, 8 and 10 you can also discuss with the other pair in your group, the payment is as follows.

Trial 1 Normal payout

Trial 2 Normal payout

Trial 3 Normal payout

Trial 4 Normal payout

Trial 5 Bonus – payout (and penalty) multiplied by 3

Trial 6 Normal payout

Trial 7 Normal payout

Trial 8 Payout (and penalty) *squared* (but pay still positive, penalty negative)

Trial 9 Normal payout

Trial 10 Payout *cubed*

N.B. This means that if 3 x X and 1 x Y, $1^3 = 1$, whilst $(-3)^3 = -27$.

As a class, analyse the outcomes of the game, and how cooperation and completion played a role in the results.

AREA OF STUDY 3: Development of individual behaviour**Outcome 3**

Outline the key developmental stages in perception, cognition and understanding of self, and describe the main developmental theories in these areas.

Examples of learning activities

pictorially represent the perceptual abilities of young infants

compare and contrast Gibson and Walk's study (1960) with that of Campos et al. (1992)



create a PowerPoint presentation on cognitive or perceptual development

prepare a poster to use as the basis to a talk on Piaget's theory, including the correct identification of skills acquired at each stage and relevant tests to measure these skills

analyse Piaget's theory and provide a three-point criticism in the light of more recent research

create and use a self-esteem inventory relating to two aspects of self-esteem, e.g. academic and sporting (it is better **not** to venture into more personal aspects such as social self-esteem or personal appearance)

devise an activity to measure a specific cognitive or perceptual ability of an infant

Detailed example**PIAGET'S THEORIES OF COGNITIVE DEVELOPMENT**

Prepare an A2 size poster that you can use as the basis of a five-minute talk on Piaget's theories of cognitive development.

The poster should contain the following:

- the ages at which the stages occur
- the name of each stage
- characteristic thought processes of each stage – including new developments from the previous stage and limitations to thought processes
- main developmental tasks to be achieved by the completion of the stage
- diagrams or pictures illustrating the concepts that have been explained in text boxes on the poster.


Unit 2**AREA OF STUDY 1: Introduction to neurons and nervous system****Outcome 1**

Explain the roles of the neurons, synapses, neurotransmitters and neuromodulators, and describe the functions of the central nervous system.

Examples of learning activities

produce a diagram/poster of a neuron with labelled parts

create a model of a neuron clearly showing its key components


 using the Internet, research behaviours that have been associated with various parts of the brain and explain the steps and ethical principles associated with the research

prepare a written and pictorial summary of the main processes involved in the transmission of neural impulse

dissect a sheep's brain; identify the hindbrain, midbrain and the forebrain

 visit the Whole Brain Atlas website for a virtual brain dissection

investigate the main functions of the spinal cord

 visit the Psychworld University website at <http://inst.santafe.cc.fl.us/~mwehr/> or visit the 'Neuroscience for Kids' website for activities and tutorials to collect information to explain the role of Somatic Nervous System and Autonomic Nervous System (ANS)

Detailed example**MODEL OF A NEURON WITH KEY PROCESSES INVOLVED IN A NEURAL IMPULSE**

Using a range of materials, create a model of a neuron.

It should clearly show the following key parts of a neuron:

- soma (cell body)
- dendrites
- axon
- axon terminals
- terminal buttons.

Appropriate materials may include:

- paper, paper mache, cardboard
- polystyrene
- wire.

Your presentation should include the following:

- the point at which a neural impulse is received by the neuron
- the mechanism and direction in which a neuron sends information down its axon
- the point at which the neural impulse leaves the neuron
- an explanation of and location of the synapse
- the role of neurotransmitters in the neural impulse
- the role of neuromodulators in comparison with neurotransmitters.

AREA OF STUDY 2: Individual differences**Outcome 2**

Analyse the strengths and limitations in scientific approaches to defining 'normality' and in the application of psychological assessment in this area.

Examples of learning activities

produce a poster report summarising the various definitions of 'normality' and the strengths and limitations of each

view a film such as *As Good as it Gets* or *Beautiful Mind* and consider the features that demonstrate abnormality from the medical model

in small groups or individually collect information on customs and cultures from different societies or different periods in history and present to the class

use data to construct the bell curve of normal distribution

view *Good Will Hunting* and analyse the main characters from the viewpoint of Gardner's multiple intelligences model



use text resources and the Internet for IQ tests and have each member of the class take one and record 'IQ' score; sit alternative tests and plot and analyse results



use personality tests such as the 'Colours' test from the Internet, and rate own and another's results for validity

analyse a campaign designed to raise the public's awareness of mental health



use a spreadsheet package to create a frequency curve for a given data series which can be compared to the normal curve for variation, skew and range



visit www.multi-intelligence.com and www.ldpride.net/learningstyles.MI.htm and discuss the validity of the intelligence tests available through links

Detailed example**TRAINING INTELLIGENCE**

Using a resource such as 'Know your own IQ' or 'Check your own IQ' (Eysenck, HJ, Penguin Books) or other commercially available 'Group IQ Test' or Internet based test or the National IQ Test from Channel 9.

- Sit the test and record personal results.
- Practice solving questions of the type asked and take a parallel or similar test.

- Anonymously submit as data the amount of improvement between test one and test two.
- Plot data and analyse the validity of such 'IQ' tests.

This activity also provides a good exemplar of appropriate report-writing.

AREA OF STUDY 3: Social attitudes**Outcome 3**

Describe attitude formation and factors that affect prejudice.

Examples of learning activities

view 'Blue Eyed' – the program of Jane Ellis' seminars on racial prejudice; also view the 'Australian Blue Eyed' from her visit in 2001; compare and contrast the programs

analyse attitudes to current events in terms of the ABC model (affective, behavioural, cognitive)

prepare a survey instrument as a Likert-type scale with a view to quantifying attitudes, e.g. towards minority groups

debate the relationship among the concepts of attitude, prejudice and discrimination



create a PowerPoint presentation to identify factors that contribute to attitude change – in particular to reduction in prejudice

consider necessary ethical principles in the administration of survey instruments

administer the Likert-type scale developed to a range of age-groups in order to investigate the relationship between prejudice and age

plot scatterplots of age and attitude scores to investigate variations in prejudice with age; calculate the significance of the correlations shown based on strength of correlation and sample size

Detailed example**CONSTRUCTION OF A LIKERT-TYPE SCALE TO MEASURE ATTITUDES**

A class decision is taken to determine what 'Attitude Object' or 'Attitude Event' is to be measured.

Each class member is asked to create four Likert-type statements, two being positive towards the *Attitude Object* and two negative (for reverse scoring).

Questions are collated and class members decide which are appropriate, which are redundant and any further areas that require construction of a new statement.

Approximately 24–30 items are retained, with 50 per cent being reverse-scored.

Ethical principles in collection of primary data are discussed, as are *Standardised Procedures*.

Each student administers the survey to about five participants with a range of ages.

Data is collated and plotted; statistical significance is calculated.

Unit 3**AREA OF STUDY 1: Brain and nervous system****Outcome 1**


Explain the major functions of the brain including cortical lobes and hemispheric specialisation, and the role of the central nervous system, and evaluate the strengths and limitations of brain research methods.

Examples of learning activities


create a chart of the divisions of the nervous system including central nervous system and both divisions of the peripheral nervous system

draw a diagram of the human brain and parts of the nervous system, labelling the two hemispheres, the four lobes of the cerebral cortex, Broca's area and Wernicke's area; provide explanations for the parts

investigate the effects of damage to specific regions of the brain

 visit the Brain Sciences Institute (BSI) at Swinburne University home page and consider their viewpoints on the role of the nervous system in determining behaviour

 research the use of brain-imaging techniques on the Internet

 create a multimedia simulation of the structure and function of the brain

 explore brain function at the neuroscienceforkids website of Washington University

produce a poster outlining the areas and main roles of the sympathetic and parasympathetic nervous system

investigate the uses and limitations of the polygraph

investigate the physiological and psychological effects of stress including health issues (stress-induced illness and reduced immunity) and the General Adaptation Syndrome

Detailed example

PRESENTATION OF THE KEY BIOLOGICAL BASES OF BEHAVIOUR

1. Draw a diagram of the brain and label:
 - the two hemispheres of the cerebral cortex
 - the corpus callosum.
2. Draw a diagram of the cerebral cortex and label:
 - the four lobes: frontal, parietal, occipital and temporal
 - Broca's area and Wernicke's area.
3. Provide an explanation of the main functions of each of the four lobes.
4. Provide an explanation of the main functions of Broca's area and Wernicke's area.
5. Outline the difficulties that arise with both Broca's Aphasia and Wernicke's Aphasia.
6. Draw a diagram of parts of the nervous system, and provide a brief explanation of the area of the body controlled by each part.
7. Explain the functions of the sympathetic and parasympathetic divisions of the autonomic nervous system.

Provide examples of the effects of each division of the autonomic nervous system on:

 - heart rate
 - galvanic skin response
 - pupils
 - bladder
 - lungs
 - digestion.

AREA OF STUDY 2: Visual perception**Outcome 2**

Explain the nature of the processes involved in visual perception.

Examples of learning activities

discuss the main processes involved in the visual perceptual system



explore a CD-ROM tutorial on visual perception

apply knowledge of principles of perception by identifying their presence in artwork, signs and symbols

participate in activities that illustrate phenomena in the visual perceptual system, e.g. locating the blind spot, producing a negative after-image


conduct an empirical research activity on size constancy, shape constancy or Gestalt principles; and report findings

attempt to throw and catch a tennis ball using one eye only and using both eyes; tabulate data collected and draw conclusions about the relative effectiveness of monocular cues alone and monocular and binocular cues used together

consider how the above research could be used to analyse the way in which depth-perception ability varies with practice in primary school students; consider ethical principles, stratified sampling and random allocation to experimental and control groups

draw cartoon-type pictures incorporating pictorial depth-cues

read an account of a research design (e.g. Allport; Mackworth and Loftus), and identify the factors influencing the subject's visual perception

 visit www.illusionworks.com or www.exploratorium.edu and prepare a presentation on one of the visual illusions explained at those sites

conduct an empirical research activity to measure the Muller-Lyer illusion

make a paper model of the Ames room (A3 paper is appropriate)

Detailed example

EMPIRICAL RESEARCH ACTIVITY: EVALUATING THE USE OF SIZE CONSTANCY

This task makes use of an activity on size constancy such as that included in Grivas and Lawrie (1991).

Working in small groups, students should prepare the necessary materials for this activity, and select non-psychology students as subjects. Class data should be collated and students should write their own report on the research findings.

The report should include:

- an appropriate title – an abstract
- an introduction – including information on the topic, and a summary of previous research
- identification of the independent and dependent variables

- a hypothesis, based on previous findings of research on size constancy
- a method section, including subjects, materials and procedure
- a results section, summarising the class data
- a discussion, including an analysis of the results in terms of the hypothesis, identification of the extraneous variables present in this activity and their impact on the reliability of the results
- a reference list.

Note that such an activity requires teachers and students to take into account ethical principles such as no harm to participants, informed consent, voluntary participation and debriefing.

AREA OF STUDY 3: States of consciousness

Outcome 3

Compare and contrast characteristics of normal waking consciousness with altered states of consciousness.


Examples of learning activities

describe and compare the characteristics of normal waking consciousness with altered states of consciousness; use a 'cataloguer' to investigate a physiological characteristic, such as heart-rate, before and after exercise

produce a poster presenting the characteristics of stages of sleep; include diagrams of brain wave patterns

conduct an investigation into sleeping patterns in different age groups

investigate the known sleep phenomena

 use the Internet to research sleep phenomena, and create a multimedia presentation to inform the class

describe the methods used to study sleep, identify uses of EOG, EMG, EEG

suggest research designs that could be used to investigate the effects of partial or total sleep deprivation; consider single- and double-blind procedures, repeated measures, independent groups and matched pairs designs

keep a sleep diary to record sleep phenomena experienced

Detailed example

INVESTIGATION OF THE VARIATION OF SLEEP PATTERNS WITH AGE

Aim

To compare the patterns of sleeping and waking in a 24-hour cycle for three different age-groups:

Hypothesis

1. Younger people will sleep for more hours in total than older people.
2. Younger people will sleep for longer periods at any one time than older people.

METHOD**Subjects**

Subjects should be selected so that each student surveys one young person, between the ages of 13 and 18, one adult of between 35 and 45 years, and one older person of over 65 years.

Materials

One three-question survey form and record sheet.

Procedure

Each class member will survey one subject in each of the age groups.

The standard procedure is to be followed with each subject.

1. Approach and say 'I am a VCE student doing a survey on sleep patterns for one of my work requirements, would you mind if I ask you a few short questions? This survey is entirely anonymous'.

2. If the subject indicates willingness to take part, say 'Could you tell me which of the age-groups applies to you?'

13 to 18 35 to 45 over 65

3. Record the age group and then say: 'For each of these questions, could you think back and give the average figure for the past week?'
 - i) On a normal day, how many hours did you sleep?
 - ii) On average, how many times did you awaken during each night?
 - iii) If you did awaken in the night, on average for how long did you remain awake?
4. Say 'Thank you very much for your help'.

Results

Class members will 'pool' their results, so that each student will have data relating to one subject for each age-group for each class-member. If the class is very small (less than 10) it would be better for each student to survey two subjects in each age group.

Conclusions

Conclusions will relate to whether or not the hypothesis, which was derived from the evidence of previous research, is accepted. If it cannot be accepted, or is only correct in part, then an explanation for the total or partial rejection should be found.

Unit 4

AREA OF STUDY 1: Memory

Outcome 1

Use the information processing model of memory to describe different ways in which memory is expressed and compare theories of memory.

Examples of learning activities



conduct a memory activity to compare the differences in recalling and recognising nonsense syllables; utilise a spreadsheet package to plot the forgetting curve based on class data

explain the distinctions between echoic and iconic sensory memory (capacity and duration)

compare and contrast short-term memory and long-term memory (capacity, duration); compare loss from short-term memory (displacement) with loss from long-term memory (interference and possible decay)

form an operational hypothesis and conduct empirical research into the rate of forgetting for two different methods of encoding

use research, e.g. Jenkins and Dallenbach (1924), to demonstrate the significance of interference on long-term memory

discuss the various means of measuring retrieval and the relative sensitivity of each measure

discuss the semantic network theory and its characteristics and elements (hierarchical; nodes and links)

investigate organic causes of forgetting – amnesia, its characteristics and causes

summarise Ebbinghaus' research and draw the forgetting curve

participate in class activities to demonstrate mnemonic devices, e.g. method of loci, verbal mnemonics



use the Internet to research mnemonic devices and create a multimedia presentation 'Study strategies to assist encoding and retrieval' to inform the class

Detailed example

EMPIRICAL RESEARCH ACTIVITY

Aim

To investigate the rate of forgetting for two different methods of encoding.

Hypothesis

An appropriate operational hypothesis can be developed.

METHOD

Subjects

Use about 20 subjects – a psychology class or another class is appropriate.

Materials

A list of thirty pairs of terms – not logically associated with each other:

e.g. cat – ball	house – shirt
table – run	bird – sleep
lamp – cloud	man – nest
horse – seven	hop – swim
ski – doughnut	disc – grass
fly – snail	nose – picture
giraffe – pill	truck – dinner
worm – ice-cream	bed – card
lion – carrot	young – bus
ghost – wall	jump – theatre
grade – frog	hand – shout
cupboard – eat	policeman – potato
computer – cow	telephone – drink
snore – book	test – orange
bulb – iron	paper – seagull

Procedure

Read the list of pairs five times – the learning phase.

Test the subjects on ten of the terms (at random) by giving a list of ten words, and requiring subjects to list the other one of the pair. Perform these tests at intervals of:

Test 1 – Time 0 minutes (the sixth test of the learning series)

Test 2 – Time 20 minutes (after test 1)

Test 3 – Time 60 minutes (after test 1)

Test 4 – Time 3 hours (after test 1)

Test 5 – Time 24 hours (after test 1)

Test 6 – Time about 72 hours (after test 1)

Test 7 – Time 7 days (after test 1)

Test 8 – Time 14 days (after test 1)

Results

Graph the results for each group separately, to generate a 'forgetting curve'.

Plot 'elapsed time' on the horizontal axis and '% correct response' on the vertical axis.

Discussion

Discuss in terms of accepting or rejecting the hypothesis stated and form generalised conclusions.

AREA OF STUDY 2: Learning

Outcome 2

Compare and contrast theories of learning, including: classical and operant learning, observational learning, and behaviours not dependent on learning.

Examples of learning activities



explore a CD-ROM tutorial on learning and identify the characteristics of a 'learning curve'

identify the elements of classical conditioning; conditioned stimulus association; acquisition; extinction; spontaneous recovery; generalisation; discrimination

participate in an activity to demonstrate classical conditioning, e.g. association of pupil dilation with a bell or buzzer

critically analyse the procedure and the ethical issues in research conducted by Watson on 'Little Albert'



conduct a web-search for 'Skinner' and 'Thorndike' and write a paragraph about each and their contribution to learning theory

identify the elements of operant conditioning; reinforcement (primary and secondary reinforcers, positive and negative reinforcement) punishment, schedules of reinforcement; shaping; extinction; spontaneous recovery; generalisation; discrimination

apply knowledge of schedules of reinforcement by identifying examples of partial reinforcement in society

create a list of processes using operant conditioning in practice

prepare a written summary of the main features of classical conditioning and operant conditioning; include the distinctions between them



create a multimedia simulation of classical and operant conditioning

discuss the stages of observational learning (attention; retention; reproduction; motivation/reinforcement)

critically analyse one of Bandura's 'Bo-Bo doll' experiments



utilise a spreadsheet package to plot a learning curve based on class data



create a PowerPoint poster presentation detailing a comparison and contrast of classical and operant conditioning

Detailed example

CREATE A POWERPOINT PRESENTATION TO COMPARE AND CONTRAST CLASSICAL AND OPERANT CONDITIONING

Key areas to be included:

- Nature of the response (voluntary/reflexive).
- Role of the learner (active/passive).
- Means of reinforcement.
- Timing of stimulus and response.
- Association between stimuli.
- Specificity of stimulus-response relationship.
- Emotions/goal-seeking behaviour.
- Response depending on reinforcement or reinforcement depending on response.

Diagrams could include:

- Skinner Box.
- Classical Conditioning tabular explanation.

Examples of each are needed:

- Phobias.
- Token economy.

One trial learning

Taste aversion – **Not** classical conditioning.

AREA OF STUDY 3: Research investigation**Outcome 3**


Report on a research investigation that included the formulation of a hypothesis, application of a research method, use of an ethical framework and the collection, analysis and interpretation of data.

Examples of learning activities

research literature on one aspect of learning or memory and propose an area of research

identify independent, dependent and extraneous variables in a research design and formulate an operational hypothesis

design an experimental method that controls confounding variables through appropriate sampling and experimental design; carry out the research, collect data

 apply knowledge of statistical procedures by analysing the set of data (above), this may be undertaken using various statistics software packages; draw conclusions from the analyses and generalise from these conclusions

consider constructive and negative criticism of the experimental method (above) and make suggestions for further research in the area

create a full report of the research (above) including abstract; introduction; method; results; discussion and reference sections

Detailed example**THE EFFECTS OF TWO DIFFERENT ENCODING METHODS ON RATE OF LEARNING**

– an extension from research activity (Page 45)

This example illustrates how a typical empirical research activity can be extended to produce a research investigation.

Aim:

- To investigate the effect of practice on performance in a novel learning task.
- To compare the efficiency of two different methods of encoding.

Hypothesis:

- Performance on the task will improve with practice, so that more pairs of terms will be recalled on later trials.
- The visual imagery group will learn more quickly than the rehearsal group.

METHOD**Subjects**

Select a reasonable number (at least 30) of naive subjects.

Materials

A list of thirty pairs of terms – not logically associated with each other:

e.g. cat – ball	house – shirt
table – run	bird – sleep
lamp – cloud	man – nest
horse – seven	hop – swim
ski – doughnut	disc – grass
fly – snail	nose – picture
giraffe – pill	truck – dinner
worm – ice-cream	bed – card
lion – carrot	young – bus
ghost – wall	jump – theatre
grade – frog	hand – shout
cupboard – eat	policeman – potato
computer – cow	telephone – drink
snore – book	test – orange
bulb – iron	paper – seagull

Procedure:

- Divide subjects (at random) into two experimental groups (E-groups) and one control group (C-group).
- Instruct one E-group to associate the two terms in each pair by rehearsing the sound of the pairing to themselves.
- Instruct the second E-group to associate the two terms by forming visual images which create a link between the two.

Give no instructions to the C-group.

- Every three minutes, test on ten of the terms (at random) by giving a list of ten words, and requiring subjects to list the other one of the pair; record the results for test 1, test 2 etc. up to test 6.

Results

Graph the results for the rehearsal group and for the visual imagery group separately – into two comparable ‘learning curves’ – with ‘Time’ along the horizontal axis and ‘% correct responses’ on the vertical axis.

(Teacher could calculate statistical significance – Chi² test would be appropriate and simple.)

Discussion

A formal write-up of the findings, which may include, for example:

- If the graphs for both groups show increased scores with increased number of trials, then hypothesis 1 will be confirmed.
- If the imagery group had a steeper ‘learning curve’ than the rehearsal group, then hypothesis 2 will be confirmed.
- If both hypotheses are accepted, then this is noted as the conclusion, and the discussion would involve accounting for any individual discrepancies.

Suggestions for further research should be made.

SCHOOL-ASSESSED COURSEWORK

In Units 3 and 4 teachers must select appropriate tasks from the assessment table provided for each unit. Advice on the assessment tasks and performance descriptors to assist teachers in designing and marking assessment tasks will be published by the Victorian Curriculum and Assessment Authority in an assessment handbook. The following is an example of a teacher's assessment program using a selection of the tasks from the Units 3 and 4 assessment tables.

Outcomes	Marks allocated	Assessment tasks
Unit 3		
Outcome 1 Explain the major functions of the brain including cortical lobes and hemispheric specialisation, and the role of the nervous system, and evaluate the strengths and limitations of brain research methods.	40	A test on the structure of the nervous system and its functions, comprising multiple-choice and short-answer questions and the labelling of diagrams.
Outcome 2 Explain the nature of the processes involved in visual perception.	30	A report on an empirical research activity on visual perception.
Outcome 3 Compare and contrast characteristics of normal waking consciousness with altered states of consciousness.	30	An annotated poster showing the continuum of awareness from very low levels of consciousness to heightened awareness, emphasising the contrasting characteristics of normal waking consciousness and altered states of consciousness.
Total marks for Unit 3	100	
Unit 4		
Outcome 1 Use the information processing model of memory to describe different ways in which memory is expressed and to compare theories of memory.	40	A PowerPoint presentation on a topic such as 'Enhancing memory – exam preparation' or 'Organic causes of forgetting'.
Outcome 2 Compare and contrast theories of learning, including: classical and operant learning, observational learning, and behaviours not dependent on learning.	40	An essay comparing and contrasting classical and operant conditioning.
Outcome 3 Report on a research investigation that included the formulation of a hypothesis, application of a research method, use of an ethical framework and the collection, analysis and interpretation of data.	20	Design, carry out and report on an empirical research activity, on a topic such as: the effectiveness of a mnemonic device; or using visualisation techniques to enhance associative learning; or comparing rates of forgetting for nonsense syllables and meaningful monosyllabic words.
Total marks for Unit 4	100	

SUITABLE RESOURCES

Courses must be developed within the framework of the study design: the areas of study, outcome statements, and key knowledge and skills.

Some of the print resources listed in this section may be out of print. They have been included because they may still be available from libraries, bookshops and private collections.

Units 1 and 2

BOOKS

Charles, T, Edwards, L & Rogers, A 1995, *Psychology Book 1: A Course for VCE Units 1 and 2*, Oxford University Press, Melbourne.

Clarke, V & Gillet, S 1997, *Psychology for VCE Units 1 and 2*, 2nd edn, Nelson, Melbourne.

Grivas, J 1998, *Oxford Psychology Study Dictionary*, Oxford University Press, Melbourne.

Grivas, J & Lawrie, P 1991, *Psychology: Experiments and Activities*, Harcourt Brace Jovanovich, NSW.

Grivas, J, Carter, L 1999, *Psychology for the VCE Units 1 and 2*, 2nd edn, Jacaranda, Melbourne.

Rawlings, M, Barry, C, Skouteris, H & Rawlings, D 1999, *Heinemann Psychology One [Units 1 & 2]*, Heinemann, Melbourne.

Vainer, L 1999, *The PSYCHbook: Activities, Outcomes and Assessment*, A+ Publishing, Rosebud, Victoria.

VCAB, 1992, *Psychology: Course Development Support Material*, VCAB, Melbourne.

Discovering Psychology series

- *Understanding Research*

The Human Experience series

- *Why Study Human Behaviour?*
- *Research Methods*

WEBSITES

At the time of publication the URLs (website addresses) cited were checked for accuracy and appropriateness of content. However, due to the transient nature of material placed on the web, their continuing accuracy cannot be verified. Teachers are strongly advised to prepare their own indexes of sites that are suitable and applicable to the courses they teach, and to check these addresses prior to allowing student access.

American Psychological Society
www.apa.org/ed

Australian Psychological Society (APS)
www.aps.psychology.com.au

The Age Newspaper: science links
www.theage.com.au

The Go Science site
www.goscience.com

Area of study 1: Introduction to psychology

BOOKS

Findlay, B 1996, *How to write Psychology Laboratory Reports and Essays*, Prentice-Hall, Sydney.

Furey, J, Garcia-Ives, M, Hamer, G & Verstralen, L 1997, *Psychology Research Skills – Finding your way through VCE Units 1–4*, Addison Wesley Longman, Melbourne.

Salkind, Neil J 2000, *Exploring Research*, 4th edn, Prentice Hall, Upper Saddle River, New Jersey, USA.

Shaughnessy, JJ & Zechmeister, EB 1997, *Research Methods in Psychology*, McGraw-Hill International editions.

VIDEOS

Note: Discovering Psychology series has 26 programs, produced by WGBH in association with the American Psychological Association, USA. (Available from Video Education Australasia, 111A Mitchell St, Bendigo 3550, tel. 1800 034 282.)

The Human Experience series has 26 programs, available from DIDASKO, 833 Dandenong Road, East Malvern, tel. 9573 3900
www.d.idasko.com.au

Area of study 2: Social relationships

BOOKS

Vaughan, GM & Hogg, MA 2002, *Social Psychology*, Prentice Hall (Pearson Education), Frenchs Forest, NSW.

VIDEOS

The Human Experience series

- *Group influence*

Discovering Psychology series

- *Judgement & Decision Making*
- *The Power of the Situation*

Exploring the Psychology of Group & Power (BBC)

Real Smart: about bullying (VEA)

A to Z of Risk – a young person's guide (VEA)

WEBSITES

Zimbardo's prison experiment
www.prisonexp.org

Milgram's experiment
http://linuxmafia.com/~rick/migram.html

Area of study 3: Development of individual behaviour

VIDEOS

The Human Experience series

- *Infant & Child Development*

Who am I? Self esteem, media & decision making (VEA)

Worlds of Childhood (24 programs) Video Education Australasia: Bendigo.

Discovering Psychology Series (VEA)

- *The Developing Child*

WEBSITES

Anorexia Nervosa & Bulimia Fellowship of Victoria
www.ozemail.com.au/~anbulvic/

Piaget sites

www.crystalinks.com/piaget.html

<http://academics.smcvt.edu/psych/Krikstone/developmental%20lecture/tsld006.htm>

Unit 2

Area of study 1: Introduction to neurons and nervous system

BOOKS

Kalat, JW, *Biological Psychology*, Brooks/Cole, CA, USA.

Nolte, J, *The Human Brain - an introduction to its functional anatomy*, Mosby, Missouri, USA.

WEBSITES

Whole brain atlas

www.med.harvard.edu/AANLIB/hom.html

Neuroscience for kids

<http://faculty.washington.edu/chudler/neurok.html>

VIDEOS

The Human Experience series

- *The Nervous System*
- *The Neuron & Neural Transmission*

The Human Body series

- *In Control: Our Brain & Nervous System* (VEA)

The Living Body series (VEA)

- *Nerves at work*
- *Our talented brain*

Science Bank: Biology (VEA)

- *Responding to stimuli: The nervous system*

The Abnormal Psychology series (13 programs), Video Education Australasia, Bendigo.

CD-ROMs

Body Systems (VEA)

Brain Model/posters

Mentone Educational Centre

15 Chesterville Road

Moorabin Vic 3189

Tel: 03 9553 3234

Website: www.mentone-educational.com.au

Southern Biological Services

19-21 Worrell Street

Nunawading Vic 3131

Tel: 03 9877 4597

Area of study 2: Individual differences

VIDEOS

- One in five

(Schizophrenia)

Available from

Department of Human Services

Mental Health Branch

Tel: 03 9616 7777

Website: www.dhs.vic.gov.au

The Abnormal Psychology series (13 programs), Video Education Australasia, Bendigo.

Barriers of the Mind (five TV programs on mental illness)

ABC TV Program Sales: Sydney

To Hell and Back: Schizophrenia

ABC TV Program Sales: Sydney.

The Human Experience series

- *Intelligence & creativity*

WEBSITES

Schizophrenia Australia

www.sane.org

HEADWAY Vic Acquired Brain Injury Ass.

www.headwayvictoria.org.au

Mental Health Review Board of Vic

www.mhrb.vic.gov.au

Mental Illness Fellowship Vic.

www.mifellowship.org.au

The Cunningham Dax Collection of Psychiatric Art

<http://members.ozemail.com.au/~ecdax>

www.health.vic.gov.au/mental_health/links.htm

www.mentalhealthvic.org.au

www.betterhealth.vic.gov.au

www.healthinsite.gove.au

Area of study 3: Social attitudes**BOOKS**

Vaughan, GM & Hogg, MA 2002, *Social Psychology*, Prentice Hall (Pearson Education), Frenchs Forest, NSW.

WEBSITES

http://dir.yahoo.com/Social_Science/Psychology/

www.indiana.edu/~intell/

American Psychological Society
www.apa.org/ed/

VIDEOS

The Human Experience series

- *Social Cognition*
- *Attitudes*

Discovering Psychology series

- *Testing & Intelligence*

Unit 3**Area of study 1: Brain and nervous system****BOOKS**

Kalat, J W, *Biological Psychology*, Brooks/Cole, CA, USA.

Nolte, J, *The Human Brain – an introduction to its functional anatomy*, Mosby, Missouri, USA.

WEBSITES

Neuroscience for kids

<http://faculty.washington.edu/chudler/neurok.html>

Sheep brain dissection guide

<http://academic.uofs.edu/department/psych/sheep>

Whole brain atlas

www.med.harvard.edu/AANLIB/hom.html

VIDEOS

The Human Experience series

- *The Nervous System*
- *The Neuron & Neural Transmission*

Discovering Psychology series

- *The Behaving Brain*
- *The Responsive Brain*

The Human Body series

- *In Control: Our Brain & Nervous System* (VEA)

The Living Body series (VEA)

- *Nerves at work*
- *Our talented brain*

Science Bank: Biology (VEA)

- *Responding to stimuli: The nervous system*

The Abnormal Psychology Series (13 programs), Video Education Australasia, Bendigo.

CD-ROMs

Body Systems (VEA)

Brain Model/posters

Mentone Educational Centre

15 Chesterville Road

Moorabbin Vic 3189

Tel: (03) 9553 3234

Website: www.mentone-educational.com.au

Innovative physics – Connecting Physics to Industry

VCAA, 2003

St Andrews Place

East Melbourne Vic 3002

Polygraph

Tainlab – innovative tools for psychology

10 Rowern Court

Box Hill North Vic 3129

Tel: (03) 98987366

Website: www.tainlab.com

Sniffy the Virtual Rat (IBM & Macintosh) 1998, Brooks/Cole: Pacific Grove, California, USA. (Distributed by Nelson ITP, Melbourne.)

Southern Biological Services

19–21 Worrell Street

Nunawading Vic 3131

Tel: (03) 9877 4597

Area of study 2: Visual perception**BOOKS**

Rock, I, *Perception*, Scientific American Books, New York, USA.

Posner, MI & Raichle, ME, *Images of Mind*, Scientific American Books, New York, USA.

CD-ROMs

Exploring Perception (IBM and Macintosh) 1998, Brooks Cole, Pacific Grove, California, USA.

The Integrator for Introductory Psychology (IBM and Macintosh) 1998, Brooks Cole, Pacific Grove, California, USA.

MOST Psychology (IBM and Macintosh) 1998, Macmillan, Melbourne.

Psych. Now!: Interactive Experiences in Psychology (IBM and Macintosh) 1998, Brooks Cole, Pacific Grove, California, USA.

Psych. Trek: A Multimedia Introduction to Psychology (IBM and Macintosh) 1998, Brooks Cole, Pacific Grove, California, USA.

VIDEOS

Discovering Psychology series

- *Sensation and Perception*

The Human Experience series

- *Sensation and Perception*

Area of study 3: States of consciousness**BOOKS**

Baron, R 1997, *Psychology Interactive Edition*, 4th edn, Prentice Hall, NSW. (Includes an interactive CD-ROM).

Coon, D, 1998 *Introduction to Psychology: Exploration and Application*, 8th edn, Brooks Cole, Pacific Grove, California, USA.

Gross, R, 1996 *Science of Mind and Behaviour*, 3rd edn, Hodder & Stoughton, London.

Lahey, B, 1997 *Psychology: An Introduction*, 6th edn, McGraw-Hill, Sydney.

VIDEOS

The Human Experience series
• *Consciousness*

Discovering Psychology series
• *The Mind Awake and Asleep*

The Psychology of Sleep (VEA)

WEBSITES

www.med.harvard.edu/AANLIB/hom.html

Illusionworks
<http://illusionworks.com/>

Unit 4**Area of study 1: Memory**

Baron, R 1997, *Psychology Interactive Edition*, 4th edn, Prentice Hall, NSW. (Includes an interactive CD-ROM.)

Coon, D 1998, *Introduction to Psychology: Exploration and Application*, 8th edn, Brooks Cole, Pacific Grove, California, USA.

Lahey, B 1997, *Psychology: An Introduction*, 6th edn, McGraw-Hill, Sydney.

VIDEOS

The Human Experience series
• *Memory*

Memory – The Past Imperfect (VEA)

Area of study 2: Learning**BOOKS**

Baron, R 1997, *Psychology Interactive Edition*, 4th edn, Prentice Hall, NSW. (Includes an interactive CD-ROM.)

Coon, D 1998, *Introduction to Psychology: Exploration and Application*, 8th edn, Brooks Cole, Pacific Grove, California, USA.

Lahey, B 1997, *Psychology: An Introduction*, 6th edn, McGraw-Hill, Sydney.

VIDEOS

The Human Experience series
• *Learning: Classical and Operant conditioning*

Discovering Psychology series
• *Cognitive Processes*

Abnormal Psychology series

ABC produced programs & videos:
www.abc.net.au

ORGANISATIONS

ABC Program Sales
GPO Box 9994
Sydney 2001
Tel: (02) 9950 3173
Fax: (02) 9950 3169
Website: www.abc.net.au/programsales
Email: bell.victoria@a2.abc.net.au
(Videos for sale; catalogue of titles sent on request.)

Age Education Unit
250 Spencer Street
Melbourne 3000
Tel: (03) 9601 2454
Fax: (03) 9601 2219
Website: www.theage.com.au
Email: mgustus@fairfax.com.au
(Provides press clippings on selected topics)

Anorexia Nervosa and Bulimia Fellowship of Victoria
1513 High Street
Glen Iris 3146
Tel: (03) 9885 0318
Fax: (03) 9885 1153
Website: www.ozemail.com.au/~anbulvic/
Email: anbulvic@ozemail.com.au
(Services include speakers, videos and course materials.)

Australian Psychological Society (National Office)
1 Grattan Street
Carlton 3053
Tel: (03) 9663 6166
Fax: (03) 9663 6177
Website: www.aps.psychsociety.com.au
Email: natloff@psychsociety.com.au
(Excellent source for Australian journals and other publications.)

Epilepsy Foundation of Victoria
818 Burke Road
Camberwell 3124
Tel: (03) 9813 2866
Fax: (03) 9882 7159
Website: www.epinet.org.au
Email: epinet@epinet.org.au
(Services include speakers, videos and course materials.)

Royal Melbourne Zoological Gardens
PO Box 74
Parkville 3052
Tel: (03) 9285 9355 (Education)
Fax: (03) 9285 9340
Website: www.zoo.org.au
Email: mzes@zoo.org.au
(Education centre and classroom facilities available. Reference library and support provided for developing course materials, activities and ERAs.)

Schizophrenia Australia (SANE)
PO Box 226
South Melbourne 3205
Tel: (03) 9682 5933
Fax: (03) 9682 5944
Website: www.sane.org
Email: sane@sane.org
(Large range of resources, e.g. multilingual SANE Education Factsheets Pack. Order forms sent upon request.)

Video Education Australasia
111A Mitchell Street
Bendigo 3550
Tel (toll free): 1800 034 282
Fax: (03) 5441 1148
Website: www.vea.com.au
Email: vea@vea.com.au
(Videos for sale, including the Discovering Psychology series.)

Video Interaction
PO Box 4124
East Burwood VIC 3149
Tel: (03) 9886 8200

DIDASKO (Formerly Education Media Aust. P/L)
833 Dandenong Road
East Malvern 3145
Tel: (03) 9573 3900
Website: www.didasko.com.au
(A range of titles for Units 1–4 for sale.)

Mind Matters available from:
Curriculum Corporation
PO Box 177
Carlton South Vic 3053
Tel: (03) 9207 9600
Fax: (03) 9639 1616
Website: www.curriculum.edu.au/mindmatters
Email: sales@curriculum.edu.au