



STAWA DEPTH and BREADTH of CONTENT Teacher Support Documents

Senior Secondary Science WACE 2015 - 2016 Psychology: Unit 1

The STAWA Depth & Breadth of Content documents have been developed through the collaboration of teachers working in Department of Education, Catholic Education and Independent Schools.

Purpose

The STAWA Depth & Breadth of Content documents are intended to promote a shared understanding of the course content that improves moderation across schools, regions and systems/sectors.

Caution

The Depth and Breadth points of elaboration are interpretations. The ATAR syllabus content statements are the only parts of these documents that are mandated. Examiners are required to address the mandated statements only.

The STAWA Depth & Breadth of Content documents are a great example of teachers helping teachers for the benefit of all students.

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Leadership in Science Education

PSYCHOLOGY

ATAR Year 11

Unit 1

Unit description

This unit focuses on a number of concepts that enable students to gain an understanding of how and why people behave the way they do. Students are introduced to the human brain, focusing on the major parts and lobes of the cerebral cortex, and review case studies, illustrating the link between the brain and behaviour. They also explore the impact of external factors, such as physical activity and psychoactive drugs, on individuals' behaviour. Cognitive processes, such as sensation and perception and selective and divided attention, are investigated. The impact of others on behaviour is also studied. Students examine different types of relationships and look at the role of verbal and non-verbal communication in initiating, maintaining and regulating relationships. Students are introduced to ethics in psychological research and carry out investigations, following the steps in conducting scientific research. They identify the aims of psychological investigations and apply appropriate structure to sequence data using correctly labelled tables, graphs and diagrams.

Research methods

Planning and conducting psychological research

- research terminology
 - experimental, non-experimental
 - scientific, non-scientific
 - sample
 - population
- ethics in psychology research
 - informed consent
 - confidentiality
 - voluntary participation and withdrawal rights
 - deception in research
- steps in the scientific method
- differences between sample and population data

- experimental research methods
 - independent and dependent variables
 - operational hypotheses
 - controlled and uncontrolled variables
 - experimental and control groups
 - reliability and validity
- non-experimental (descriptive) research methods
 - case studies, surveys, correlational studies and archival research
 - behavioural variables (not dependent and independent variables) in correlational studies
- qualitative methods of data collection
- quantitative methods of data collection – fixed response, rating scales

Processing and evaluating psychological research

- methods of displaying quantitative data – tables, graphs and diagrams
- interpretation of the following forms of data:
 - mode
 - mean
 - median
 - range
- role of probability
- use of correlation to establish association between variables
- sources of error in data and ways of reducing them
- evidence-based conclusions related to the hypothesis

Science Understanding

Syllabus Statement	Elaboration	Activities	Assessment opportunities
Self			
<ul style="list-style-type: none"> ▪ functions of the major parts of the brain <ul style="list-style-type: none"> ▪ hindbrain ▪ midbrain ▪ main features of the four lobes of the cerebral cortex ▪ forebrain ▪ left and right hemispheres ▪ corpus callosum 	<ul style="list-style-type: none"> • Describe the basic function of the brain • identify and label each of the major parts of the brain: including structures within the midbrain, hindbrain and forebrain • Describe the function of each of the major parts of the brain • Describe the function of each of the lobes • Severing of the corpus callosum and how this affects motor control • Describe the specialisation of the right and left hemispheres 	<p>Brain Dissection http://kidshealth.org/parent/general/body_basics/brain_nervous_system.html</p> <p>The Lobotamist – SBS Documentary</p> <p>Build a Plasticine Brain Build a Brain hat / Balloon Brain Split brain Patient http://www.youtube.com/watch?v=aCv4K5aStdU</p> <p>Activity 5 the split-brain students - APA Split brain research simulation - http://www.nobelprize.org/educational/medicine/split-brain/splitbrainexp.html</p> <p>Into The Mind Episode 3 - Broken Brains Brain injuries summarised http://www.rah.sa.gov.au/birs/bi_brain.php</p>	<p>Phineas Gage as a case study Also look at -Sperry (Split brain studies) -Karl Lashley</p>
<ul style="list-style-type: none"> ▪ structure of the neuron 	<ul style="list-style-type: none"> ▪ Function of the structures listed in transmitting nerve impulses 		

<ul style="list-style-type: none"> ▪ cell body ▪ axon ▪ dendrites ▪ myelin sheath 	<ul style="list-style-type: none"> ▪ Compare and contrast axons and dendrites ▪ 	<p>Make a model neuron Label a diagram of a neuron Action potential role play</p>	
<ul style="list-style-type: none"> ▪ methods for investigating brain function <ul style="list-style-type: none"> ▪ external recordings – electroencephalography (EEG) ▪ scanning techniques <ul style="list-style-type: none"> ○ still pictures – computed axial tomography (CAT) scan, magnetic resonance imaging (MRI) ○ dynamic pictures – functional magnetic resonance imaging (fMRI), positron emission tomography (PET) scan ▪ case study – Phineas Gage 	<ul style="list-style-type: none"> ▪ Awareness of these methods as indirect evidence for brain function ▪ Describe the procedure for each of these techniques ▪ Identify output images from each type of brain imaging technique ▪ Compare pros and cons of these techniques ▪ Describe events leading to P. Gage’s brain injury and effects on his behaviour. ▪ Describe and evaluate the case study as a research technique ▪ Explain why Phineas Gage was such an important historical case study possibly include other studies: Henry Molaison, Lashley ▪ 	<ul style="list-style-type: none"> ▪ Mix and match cards with output images, description of procedure and names of techniques ▪ Phineas Gage overview http://neurophilosophy.wordpress.com/2006/12/04/the-incredible-case-of-phineas-gage/ ▪ Brain imaging techniques https://www.st-andrews.ac.uk/psychology/research/brainimaging/ ▪ 	<p>Phineas Gage – case study</p> <p>There is quite a strong focus on Phineas Gage in this section I would also include Sperry, Lashley, Molaison</p>
<ul style="list-style-type: none"> ▪ factors that affect behaviour, emotion and thought <ul style="list-style-type: none"> ▪ physical activity ▪ psychological and physiological 	<ul style="list-style-type: none"> • Define physical activity • Theorists / research on effects of physical activity e.g McCann and Holmes, Fields and Myers. • Describe role of endorphins • Describe overall effects on well-being (reduction of stress, reduction of 	<p>Drug Aware website</p> <p>Clickview online videos on the effects of cannabis and alcohol on the body/behaviour</p>	<p>Pamphlet production / research project contrasting effects of drugs and exercise on the individual</p>

<p>responses to recreational drugs – cannabis, alcohol and amphetamine</p>	<p>depression, positive mental health)</p> <ul style="list-style-type: none"> • Define psychological response • Define physiological response • Describe the difference between the psychological and physiological response • Define recreational drugs • Describe the psychological and physiological responses of each of the drugs named • Describe the psychological and physiological effects of these drugs taken in combination • Identify cannabis as hallucinogenic drug-also LSD • Identify alcohol as a depressant drug also Morphine, Heroin, Opium, Codeine • Identify amphetamines as a stimulant drug also ecstasy, cocaine, caffeine, nicotine • Effects on CNS, brain function • Define addiction • 	<p>Utah Learn Genetics Website: http://learn.genetics.utah.edu/content/addiction</p> <p>Profile on moods- rating scale</p>	<p>Documentary production task on effects of drugs on different age groups / genders</p>
<p>Cognition</p>	<ul style="list-style-type: none"> • 		
<ul style="list-style-type: none"> ▪ theories of intelligence <ul style="list-style-type: none"> ▪ general intelligence – Galton, Spearman ▪ measuring mental age and intelligence quotient – Binet and Simon, Terman 	<ul style="list-style-type: none"> • Define intelligence • Describe each of the theories of intelligence • Describe each of the methods of measuring intelligence as associated with these theories • State the difference between general and specific intelligence 	<p>Viewing online IQ tests Take and compare/critique online intelligence tests: IQ and EQ.</p> <p>Taking Garner’s multiple intelligence tests</p>	

<ul style="list-style-type: none"> ▪ empirical approaches to intelligence – Wechsler ▪ multiple intelligences – Gardner ▪ emotional intelligence – Golman 	<ul style="list-style-type: none"> • Describe the development of the IQ test over time • Strengths and limitations of each approach to measuring intelligence 	<p>Visit from school counsellor re: testing in schools</p>	
<ul style="list-style-type: none"> ▪ intelligence testing <ul style="list-style-type: none"> ▪ advantages and disadvantages of group and individual testing 	<ul style="list-style-type: none"> • Define group testing • Define individual testing • Identify when group testing and individual testing would be used • Introduce normal distribution curves as a means to display IQ (no detail on how this is produced) • Advantages and disadvantages of individual testing and of group testing • Cultural bias in testing 	<p>Group presentations and peer teaching Cultural free testing examples</p>	<p>Investigation task 1 Page 51 Stage 2 Psychology workbook (Hackett) This links in with Self which is taught in Unit 2, I would include this task then</p> <p>Consultancy Brief – Sample assessment task This task also includes attitudes and personality which is problematic as taught in Unit 2. I would use this task in Unit 2</p>
<ul style="list-style-type: none"> ▪ the role of sensation and perception in cognition <ul style="list-style-type: none"> ▪ sensory organs and stimuli ▪ perception – illusions and distortions of 	<ul style="list-style-type: none"> • cognitive processors • links between cognitive processors and behaviour • using information models to understand cognition and behaviour • Describe the role of the organs, not structure. • Type of stimuli each organ detects (eye- light, nose – olfaction, tongue – olfaction, chemical, ear – hearing and mechanical, skin – pressure, pain, temperature) 	<p>Pogenforff illusion Visual illusions online Case studies on colour-blindness and blind sight McGurk effect video Stroop effect Hanover</p>	<p>Info processing models Old SCSA website – Approved investigation.</p>

<p>visual perception</p> <ul style="list-style-type: none"> ▪ attention – selected, divided, habituation, dishabituation 	<ul style="list-style-type: none"> • Define sensation • Define perception • Distinguish between sensation and perception • Shape, colour, constancy and visual illusions • Describe an illusion • Define distortions • Define attention • Describe selected, divided, habituation, dishabituation • Describe the Muller-Lyer illusion • Explain the Muller-Lyer illusion • Ponzo illusion • Define and describe perceptual expectancy • Outline cultural differences in perception • Perceptual set • Top down processing/ bottom up processing • Constructivist vs nativist theory 	<p>Rubber hand illusion Haber and Levin (2001) case study</p>	<p>Unit 1a comparing selected and divided attention.</p>
<ul style="list-style-type: none"> ▪ physiological responses indicating different states of consciousness <ul style="list-style-type: none"> ▪ electrical activity of the brain ▪ heart rate ▪ body temperature ▪ galvanic skin response 	<ul style="list-style-type: none"> • Define consciousness • Outline the different states of consciousness: from total awareness to lack of awareness break these states down : attention, sleep, daydreaming, meditation, hypnosis, drug- induced states, physiological arousal • Describe how brain waves are measured using the EEG • What happens to our bodies when we sleep • Stages of sleep- REM • Describe how heart rate is measured • Describe how body temperature • Describe how the galvanic skin response is measured • Name and describe the different brain wave patterns 	<p>Analysis of secondary data to determine the stage of consciousness Lie detector tests – describe use Hypnosis and meditation as examples of reduced consciousness. Look at sleep patterns/waves</p>	

	<ul style="list-style-type: none"> • Explain how each of these measures can indicate consciousness • Describe pain and pain management 		
Others	<ul style="list-style-type: none"> • 		
Relational influences	<ul style="list-style-type: none"> • 		
<ul style="list-style-type: none"> ▪ types of relationships <ul style="list-style-type: none"> ▪ pro-social ▪ anti-social 	<ul style="list-style-type: none"> • Define pro-social relationships • Define anti-social relationships • Empathy and altruism as examples of pro-social relationships • Bullying as an example of an antisocial relationships • Relationship formation 	<p>Observation Bullying case studies</p>	
<ul style="list-style-type: none"> ▪ determinants of liking <ul style="list-style-type: none"> ▪ proximity ▪ similarity ▪ reciprocity 	<ul style="list-style-type: none"> • Define liking • Define proximity • Define similarity • Define reciprocity • Describe how proximity, similarity and reciprocity influence liking • Explain why people act pro-socially • Explain why people act antisocially 	<p>Role play on how the factors affect liking Attractiveness study- human faces</p>	
<ul style="list-style-type: none"> ▪ relationship development in adolescence <ul style="list-style-type: none"> ▪ changing structure of adolescent groups – Dunphy 	<ul style="list-style-type: none"> • Define adolescence • Define cliques, crowds, dyads • Describe the difference between cliques, crowds and dyads • Describe Dunphy’s research including findings. • Differences between male and female friendships 	<p>Relationship/friendship structure Schoolyard observations</p>	

Communication	<ul style="list-style-type: none"> • 		
<ul style="list-style-type: none"> ▪ non-verbal communication <ul style="list-style-type: none"> ▪ body language ▪ gestures ▪ physical distance ▪ facial expressions ▪ touch and smell 	<ul style="list-style-type: none"> • define communication • define verbal and non-verbal communication • Describe how gestures are used to communicate • Describe how body language is used to communicate • Describe how physical distance affects communication • Describe how facial expression are used to communicate • Describe how touch and smell are means of communication • Cultural differences in communication 	Different types of communication – use of social media to communicate Non- verbal communication clips- Mr Bean	
<ul style="list-style-type: none"> ▪ effective communication <ul style="list-style-type: none"> ▪ listener/receiver attributes ▪ active listening ▪ working collaboratively ▪ assertive communication ▪ the impact of hearing impairment and language delay ▪ role of language in initiating, maintaining and regulating interpersonal relationships – Robinson’s social skills 	<ul style="list-style-type: none"> • Define effective communication • Define listener • Describe attributes of an effective listener • Define receiver Learning to communicate- scaffolding • Describe attributes of effective receiver • Differentiate between active vs passive listening • Describe common barriers to active listening and their impact on effective communication • Describe the role of context in effective communication • Define working collaboratively • Describe internal communication networks within groups • Describe assertive communication and distinguish it from passive and aggressive communication. • Specific language impairments (SLI) 	Youtube - Shaking Hands man Observational studies on hand shaking and personal space/politeness Visit from speech pathologist Autism videos Sign language activities	

	<ul style="list-style-type: none"> • Define hearing impairment • Describe conductive, sensori-neural and combined hearing impairments and explain how they impact effective communication • Methods of overcoming the impact of hearing impairments: AUSLAN and cochlear implants • Factors affecting the severity of hearing impairment including age of identification, age of intervention, severity of loss, type of intervention • Lip reading • Define interpersonal relationships • Describe Robinson’s theory of social communication: hand-shaking, terms of address and politeness • Cultural differences in social skills and use of language 		
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