



Board/Authority Authorized Course:
 Psychology 11
 Biopsychology and Cognition

School District/Independent School Authority Name: School District No. 73 (Kamloops-Thompson)	School District Authority Number: SD73
Developed by: Susan Kabotoff	Date Developed: November 2017
School Name: NorKam Senior Secondary School	Principal's Name: Jon Brady
Superintendent Approval Date (for School Districts only):	Superintendent Signature (for School Districts only):
Board/Authority Approval Date:	Board/Authority Chair Signature:
Course Name: Psychology 11 Biopsychology TRAX Course Code (YPSYC 11)	Grade Level of Course: Grade 11
Number of Course Credits: 4	Number of Hours of Instruction: 120

Board/Authority Prerequisite(s):

English 9, Social Studies 9

Special Training, Facilities or Equipment Required:

Teacher will possess three upper level university courses in the field of Psychology.

Course Synopsis:

The purpose of the Biopsychology course is to introduce the systematic and scientific study of the behavior and mental processes of human beings and other animals. Included is a consideration of the psychological facts, principles, and phenomena associated with the biological level of analysis in Psychology. Students also learn about the ethics and methods psychologists use in their science and practice. There is extensive overlap between neuroscience in the Biology curriculum and Career Life Education in the BC Curriculum.

Goals and Rationale:

Learning Psychology helps us to learn about ourselves and others. Due to the nature of the discipline, students will be encouraged to evaluate research, pursue inquiry and synthesize information in a meaningful and often personal way. Understanding how brain function, emotions and human behavior interact enables student understanding and helps them to lead healthier lifestyles.



Board/Authority Authorized Course:
Psychology 11
Biopsychology and Cognition

Aboriginal Worldviews and Perspectives:

Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors – In psychology students will be asked regularly to discuss how what they are learning can contribute to their mental health and that of others.

Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place). Reaction and reflection journals allow students to take the time to deeply think about course contents and the classroom context in Psychology. Discussions are directed in a collaborative, Socratic manner rather than being competitive or conflictual in nature.

Learning involves recognizing the consequences of one's actions. In many instances during the study of drugs and neurotransmission, students will experience and understand how simple social choices can have long-term and behavior-altering consequences.



Board/Authority Authorized Course:
Psychology 11
Biopsychology and Cognition

Big Ideas

<p>We can best understand human behavior if we view it from three levels - the biological, cognitive, and social-cultural</p>	<p>Our perception, thinking, memory, and attitudes all operate on two levels: conscious and unconscious.</p>	<p>The field of psychology supports thinking that examines assumptions weighs evidence, and tests conclusions.</p>	<p>The field of neuroscience and the study of the brain can help us to understand why we sometimes behave as we do.</p>	<p>Studies in psychology respect a strict ethical code and can encompass both qualitative and quantitative research methods</p>
---	--	--	---	---

Learning Standards

Curricular Competencies	Content
<p><i>Students are expected to do the following:</i></p> <p>Gather, Interpret and Analyze and Critical Thinking Skills – Students can use critical thinking to evaluate and interpret psychological studies</p> <p>Evaluate and Apply research methods in psychology, respecting ethical guidelines and best practices in human science research</p> <p>Communicate Ideas Effectively – Students can demonstrate the ability to interpret data from both theorists in the field and of their own studies, making connections to both prior knowledge and potential future impact</p> <p>Demonstrate Self-Awareness – Students can discuss how the neuroscience is evident in and has an effect on their everyday functioning as an organism</p> <p>Communication and Critical Thinking Skills – Students can discuss topics that elicit diverse reactions, accepting, identifying and sometimes defending their own viewpoint as well as those that differ thus contributing to a collaborative, safe environment rich in the exchange of ideas</p>	<p><i>Students are expected to know the following:</i></p> <ul style="list-style-type: none"> • Students can define the field of psychology and distinguish between the three levels of analysis in psychology: biological, cognitive and socio-cultural • Students can identify and evaluate research studies on their merit (reliability and validity), sample size, ethical considerations and relevance to the various topics of the course and as they apply in their daily lives, qualitative vs quantitative research • Students can describe and explain the anatomy of the brain and the Central Nervous System, the endocrine system • Students can describe neurons and the process of neurotransmission • Students can conduct or replicate common psychological experiments as they relate to basic functioning of the brain –CNS • Students can identify various neurological and nervous system conditions and their impact on daily life • Students can identify and explain the effects of the main drug types on neurotransmission • Students can explain and distinguish between sensation and perception as they apply to each sense • Students can identify states of consciousness • Students can identify how increasingly sophisticated technology has contributed to our understanding in Psychology



Board/Authority Authorized Course:
Psychology 11
Biopsychology and Cognition

Big Ideas – Elaborations

The field of psychology supports thinking that examines assumptions, weighs evidence, and tests conclusions.

- Students will be exposed to studies using various research methods: case studies, surveys, observation, correlational studies, experimentation, longitudinal studies etc.
- Understanding the limits and strengths of case studies is central to exercising caution when discussing human behaviour – i.e. focus on small participant group or sample can allow a more in-depth analysis but limits the applicability of the conclusions to the general population

Curricular Competencies – Elaborations

Gather, Interpret and Analyze and Critical Thinking Skills – *Students can use critical thinking to evaluate and interpret psychological studies*

Comparing and contrasting MRI, EEG, PET and fMRI images used in studies such as brain localization, Alzheimer's studies, Maguire et al (2006) study of changes in hippocampus, Smith (2013) U of Texas study on electrodes and the brain's self-control circuit, Massimini (2013) degree of consciousness test studies, structural vs functional imaging

Evaluate and Apply *research methods in psychology, respecting ethical guidelines and best practices in human science research.*

Numerous studies used throughout the course will be discussed for their academic merit HM-epilepsy amnesia Raine et al (1997) study on brains of murderers vs controls for brain activity, vs experiments like Martinez and Kesner (1991) on rats re role of neurotransmitter acetylcholine in learning and memory Passamonti et al (2012) study of low levels of serotonin and aggression, Gustella et al (2008 and 2010) about oxytocin and behavior as well as the Stanford Prison Experiment of models for sample size, case studies, experimentation, ethics in research etc.

Communicate Ideas Effectively – *Students can demonstrate the ability to interpret data from both theorists in the field and of their own studies, making connections to both prior knowledge and potential future impact.*

Students must replicate a simple experiment on a small scale: the Stroop effect, sense deprivation activities, and sense of smell as influences sense of taste experiment. In all activities students respect the scientific method for a basic lab write-up. In the analysis students identify how this data further reinforces claims made in class, predictions, and hypotheses.

Demonstrate Self-Awareness – *Students can discuss how the neuroscience is evident in and has an effect on their everyday functioning as an organism*

By learning about the role of the amygdala and stress in brain function, students can examine techniques we have learned from psychology for dealing with stressful situations in our daily lives, facing fears, the role of breathing and self-talk and understanding post-traumatic stress syndrome. Further, the extensive units on neurotransmission and behavior and drugs as they interfere with normal neurotransmission can help students to understand the consequences of caffeine, nicotine, cannabis, hallucinogens, alcohol and other drugs, on a short-term and long-term basis.

Communication and Critical Thinking Skills – *Students can discuss topics that elicit diverse reactions, accepting, identifying and sometimes defending their own viewpoint as well as those that differ, contributing to a collaborative, safe environment rich in the exchange of ideas*

Using individual student thought journals, Socratic seminars and general question and answer sessions, psychology students have the opportunity to explore a wide variety of controversial issues. Students will interact with both the teacher and their peers and learn to respect themselves and others in the process of the daily exchange of ideas as well as in formal communication activities like fishbowl discussions and brainstorming.



Board/Authority Authorized Course:
Psychology 11
Biopsychology and Cognition

Content – Elaborations

- digital imaging in biopsychology
- anatomy of the brain, the cerebral cortex, hemispheres, lobes, neurons, the brain and central nervous system parasympathetic vs sympathetic
- localization of function in the brain
- neurotransmitters and neurotransmission
- deregulation of neurotransmission due to stimulants, depressants, opioids, hallucinogens, chemical dependence
- genetics in psychology and special conditions: Attention Deficit Hyperactivity Disorder, Fetal Alcohol Syndrome, Autism, Spectrum Disorder, Schizophrenia, intro to abnormal psychology
- hormones, the endocrine system, and behaviour
- sensation and perception (overlapping theme from biological level of analysis into cognition)
- states of consciousness

Recommended Instructional Components:

Powerpoints, multimedia presentations, readings, work with a textbook, student-inquiry led research sessions, open discussions and processing time in both formal and informal settings

Recommended Assessment Components: Ensure alignment with the [Principles of Quality Assessment](#)

A variety of evaluation and assessment tools can be used with this curriculum (Quizlet, Kahoot.it, journals, worksheets, quizzes, tests, PBL, oral presentations, Socratic seminars, labs and essays). Care should be taken to appeal to a wide variety of learning styles and where possible, give students the ability to show what they know in multiple formats. Also, it should be acknowledged that assessment for and as learning (formative) should be used mainly to the benefit of the learning, generating marks mainly from assessments of learning (summative).

Learning Resources:

Suggested textbook: Openstax Psychology "Download for free at <http://cnx.org/content/col11629/latest/>." © 2014 Rice University. Textbook content produced by OpenStax College is licensed under a Creative Commons Attribution 4.0 International License.

Other suggested on-line resources: Khan Academy videos (on most topics) Crash Course Psychology video series many resources for course already generated and shared activities on sites like Quizlet and Kahootit

Additional Information:

Psychology 11, a natural progression in the secondary study of Psychology, will review biopsychology, research methods and basic principles of cognition, then proceed to cognition topics such as emotions, motivation and memory as well as sociocultural topics of attitudes, gender, identity, cultural origins, stereotypes, developmental psychology, relationships, mental health and careers in psychology.