



## Board/Authority Authorized Course

<b>School District/Independent School Authority Name:</b> School District 47 – Powell River	<b>School District/Independent School Authority Number (e.g. SD43, Authority #432):</b> SD47
<b>Developed by:</b> eDynamic Learning/WCLN	<b>Date Developed:</b> June 2020
<b>School Name:</b> Brooks Secondary/Partners in Education	<b>Principal's Name:</b> Bill Rounis/Don Fairbairn
<b>Superintendent Approval Date (for School Districts only):</b>	<b>Superintendent Signature (for School Districts only):</b>
<b>Board/Authority Approval Date:</b> 10/14/2020	<b>Board/Authority Chair Signature:</b>
<b>Course Name:</b> Psychology 11	<b>Grade Level of Course:</b> 11
<b>Number of Course Credits:</b> 4	<b>Number of Hours of Instruction:</b> 120

### Board/Authority Prerequisite(s):

None

### Special Training, Facilities or Equipment Required:

LMS (Moodle or Canvas) for access to the WCLN course

### Course Synopsis:

The word psychology comes from the Greek word psyche, which means the vital breath/human soul (from the Greek goddess Psykhe, the goddess of the soul). Psychology encompasses all aspects of the human experience, and the study of psychology encompasses all the elements involved in understanding behavior, and more precisely, the factors that motivate behavior.

Psychology is the study of mental processes, behavior, and the relationship between the two. Mental processes in psychology refer to learning, motivation, reasoning, and emotion, among others. In other words, the study of psychology involves learning how humans think, feel, learn, interact, perceive, and understand, whether alone or when interacting with other people or the environment.

**Goals and Rationale:**

Psychology 11 is intended to help learners gain a better understanding of themselves and others including their own behaviours, knowledge about how psychologists study human behaviour, and practical applications for enriching their lives.

**Aboriginal Worldviews and Perspectives:**

The First Peoples Principles of Learning are inherent in the aspects included in Psychology 11. The study of psychology is inseparable from connectedness, relationships, wellbeing, identity, and culture.

## BIG IDEAS

Psychology is a discipline that allows us to explore human strengths.

Psychology takes a biopsychosocial approach to explore our assumptions, values, and behaviours.

The study of psychology provides opportunities for critical thinking and prepares us to think smarter.

## Learning Standards

Curricular Competencies	Content
<p><i>Students are expected to do the following:</i></p> <p><b>Introducing Psychology</b></p> <ul style="list-style-type: none"> <li>• Explain why using our intuition about everyday behaviour is insufficient for a complete understanding of the causes of behaviour.</li> <li>• Describe the difference between values and facts and explain how the scientific method is used to differentiate between the two.</li> <li>• Explain how psychology changed from a philosophical to a scientific discipline.</li> <li>• List some of the most important questions that concern psychologists.</li> <li>• Outline the basic schools of psychology and how each school has contributed to psychology.</li> </ul> <p><b>Major Perspectives</b></p> <ul style="list-style-type: none"> <li>• Understand the core premises of biological psychology and the early thinkers.</li> <li>• Critically evaluate empirical support for various biological psychology theories.</li> <li>• Explore applications and implications of key concepts from this perspective.</li> </ul>	<p><i>Students are expected to know the following:</i></p> <ul style="list-style-type: none"> <li>• Psychology is the scientific study of mind and behaviour.</li> <li>• Though it is easy to think that everyday situations have common sense answers, scientific studies have found that people are not always as good at predicting outcomes as they think they are.</li> <li>• The hindsight bias leads us to think that we could have predicted events that we actually could not have predicted.</li> <li>• People are frequently unaware of the causes of their own behaviours.</li> <li>• Psychologists use the scientific method to collect, analyze, and interpret evidence.</li> <li>• Employing the scientific method allows the scientist to collect empirical data objectively, which adds to the accumulation of scientific knowledge.</li> <li>• Psychological phenomena are complex, and making predictions about them is difficult because of individual differences and because they are multiply determined at different levels of explanation.</li> <li>• The first psychologists were philosophers, but the field became more empirical and objective as more sophisticated scientific approaches were developed and employed.</li> <li>• Some basic questions asked by psychologists include those about nature versus nurture, free will versus determinism, accuracy versus inaccuracy, and conscious versus unconscious processing.</li> <li>• The structuralists attempted to analyze the nature of consciousness using introspection.</li> </ul>

- Understand some of the psychological forces underlying human behaviour.
- Identify levels of consciousness.
- Critically discuss various models and theories of psychodynamic and behavioural psychology.
- Understand the concept of psychological types and identify applications and examples in daily life.
- Understand the principles of behaviourist psychology and how these differ from psychodynamic principles in terms of theory and application.
- Distinguish between classical and operant conditioning.
- Become familiar with key behaviourist theorists and approaches.
- Identify applications of the behaviourist models in modern life.
- Understand the key principles of humanistic psychology.
- Differentiate humanistic psychology from biological, psychodynamic, and behaviourist psychology.
- Critically discuss and differentiate between key humanistic concepts such as motivation, need, adaptation, and perception.
- Identify how humanistic psychology, and its related streams of cognitive and evolutionary psychology, have influenced aspects of daily life and work.

### **Psychological Science**

- Describe the principles of the scientific method and explain its importance in conducting and interpreting research.
- Differentiate laws from theories and explain how research hypotheses are developed and tested.
- Discuss the procedures that researchers use to ensure that their research with humans and with animals is ethical.

- The functionalists based their ideas on the work of Darwin, and their approaches led to the field of evolutionary psychology.
- The behaviourists explained behaviour in terms of stimulus, response, and reinforcement, while denying the presence of free will.
- Cognitive psychologists study how people perceive, process, and remember information.
- Psychodynamic psychology focuses on unconscious drives and the potential to improve lives through psychoanalysis and psychotherapy.
- The social-cultural approach focuses on the social situation, including how cultures and social norms influence our behaviour.
- Biological psychology – also known as biopsychology or psychobiology – is the application of the principles of biology to the study of mental processes and behaviour.
- Biological psychology as a scientific discipline emerged from a variety of scientific and philosophical traditions in the 18th and 19th centuries.
- The fields of behavioural neuroscience, cognitive neuroscience, and neuropsychology are all subfields of biological psychology.
- Biological psychologists are interested in measuring biological, physiological, or genetic variables in an attempt to relate them to psychological or behavioural variables.
- Psychodynamic psychology emphasizes the systematic study of the psychological forces that underlie human behaviour, feelings, and emotions and how they might relate to early experience.
- Consciousness is the awareness of the self in space and time and is defined as human awareness to both internal and external stimuli.
- Sigmund Freud divided human consciousness into three levels of awareness: the conscious, preconscious, and unconscious. Each of these levels corresponds and overlaps with his ideas of the id, ego, and superego.
- Most psychodynamic approaches use talk therapy to examine maladaptive functions that developed early in life and are, at least in part, unconscious.
- Carl Jung expanded upon Freud's theories, introducing the concepts of the archetype, the collective unconscious, and individuation.
- Freud's theory describes dreams as having both latent and manifest content. Latent content relates to deep unconscious wishes or fantasies while manifest content is superficial and meaningless.
- Unconscious processing includes several theories: threat simulation theory, expectation fulfillment theory, activation synthesis theory, continual activation theory.
- One application of unconscious processing includes incubation as it relates to problem solving: the concept of "sleeping on a problem" or disengaging from

- Differentiate the goals of descriptive, correlational, and experimental research designs and explain the advantages and disadvantages of each.
- Explain the goals of descriptive research and the statistical techniques used to interpret it.
- Summarize the uses of correlational research and describe why correlational research cannot be used to infer causality.
- Review the procedures of experimental research and explain how it can be used to draw causal inferences.
- Outline the four potential threats to the validity of research and discuss how they may make it difficult to accurately interpret research findings.
- Describe how confounding may reduce the internal validity of an experiment.
- Explain how generalization, replication, and meta-analyses are used to assess the external validity of research findings.

### **Brains, Bodies and Behaviours**

- Describe the structure and functions of the neuron.
- Draw a diagram of the pathways of communication within and between neurons.
- List three of the major neurotransmitters and describe their functions.
- Describe the structures and function of the “old brain” and its influence on behaviour.
- Explain the structure of the cerebral cortex (its hemispheres and lobes) and the function of each area of the cortex.
- Define the concepts of brain plasticity, neurogenesis, and brain lateralization.
- Compare and contrast the techniques that scientists use to view and understand brain structures and functions.
- Summarize the primary functions of the CNS and of the subsystems of the PNS.
- Explain how the electrical components of the nervous system and the chemical components

actively and consciously trying to solve a problem in order to allow one’s unconscious processes to work on the problem.

- The study of neural correlates of consciousness seeks to link activity within the brain to subjective human experiences in the physical world.
- Activity in the brain can be studied and captured using functional magnetic resonance imaging (fMRI) scans.
- Behaviourist psychology should concern itself with the observable behaviour of people and animals, not with unobservable events that take place in their minds.
- The main influences of behaviourist psychology were Ivan Pavlov (1849-1936), Edward Lee Thorndike (1874-1949), John B. Watson (1878-1958), and B.F. Skinner (1904-1990).
- The idea that we develop responses to certain stimuli that are not naturally occurring is called “classical conditioning.”
- Operant conditioning refers to how an organism operates on the environment or how it responds to what is presented to it in the environment.
- Reinforcement means to strengthen, and is used in psychology to refer to any stimulus that strengthens or increases the probability of a specific response.
- There are four types of reinforcement: positive, negative, punishment, and extinction.
- Behaviourist researchers used experimental methods (puzzle box, operant conditioning or Skinner box, Little Albert experiment) to investigate learning processes.
- Today, behaviourism is still prominent in applications such as gamification.
- Humanistic psychology emerged as the “third force” in psychology after psychodynamic and behaviourist psychologies.
- The key principles of humanistic psychology include human capacity for self-actualization, self-direction, and choice.
- Carl Rogers identified five principles of a full functioning person as open, present, trusting, creative, and fulfilled.
- Humanistic psychology relies on subjective factors and utilizes qualitative methods of study.
- Abraham Maslow introduced a hierarchy of human needs including physiological, safety, belonging, esteem, and self-actualization.
- With the advance of humanistic psychology, human motivation theory shifted from a purely external or extrinsic focus to the acknowledgment of an intrinsic focus.
- Positive psychology recommends focusing on people’s strengths and virtues as a point of departure rather than analyzing the underlying psychopathology.

of the endocrine system work together to influence behaviour.

### **Sensing and Perceiving**

- Review and summarize the capacities and limitations of human sensation.
- Explain the difference between sensation and perception and describe how psychologists measure sensory and difference thresholds.
- Identify the key structures of the eye and the role they play in vision.
- Summarize how the eye and the visual cortex work together to sense and perceive the visual stimuli in the environment, including processing colours, shape, depth, and motion.
- Draw a picture of the ear, label its key structures and functions, and describe the role they play in hearing.
- Describe the process of transduction in hearing.
- Summarize how the senses of taste and olfaction transduce stimuli into perceptions.
- Describe the process of transduction in the senses of touch and proprioception.
- Outline the gate control theory of pain. Explain why pain matters and how it may be controlled.
- Describe how sensation and perception work together through sensory interaction, selective attention, sensory adaptation, and perceptual constancy.
- Give examples of how our expectations may influence our perception, resulting in illusions and potentially inaccurate judgments.

### **States of Consciousness**

- Draw a graphic showing the usual phases of sleep during a normal night and notate the characteristics of each phase.
- Review the disorders that affect sleep and the costs of sleep deprivation.

- Flow is a state of optimal performance that can be entered when a person is wholeheartedly performing a task or activity for intrinsic purposes.
- Cognitive psychology is the study of mental processes such as attention, memory, perception, language use, problem solving, creativity, and thinking.
- The main premise of evolutionary psychology is that while today the human mind is shaped by the modern social world, it is adapted to the natural environment in which it evolved.
- Psychologists use the scientific method to generate, accumulate, and report scientific knowledge.
- Basic research, which answers questions about behaviour, and applied research, which finds solutions to everyday problems, inform each other and work together to advance science.
- Research reports describing scientific studies are published in scientific journals so that other scientists and laypersons may review the empirical findings.
- Organizing principles, including laws, theories, and research hypotheses, give structure and uniformity to scientific methods.
- Concerns for conducting ethical research are paramount. Researchers ensure that participants are given free choice to participate and that their privacy is protected. Informed consent and debriefing help provide humane treatment of participants.
- A cost-benefit analysis is used to determine what research should and should not be allowed to proceed.
- Descriptive, correlational, and experimental research designs are used to collect and analyze data.
- Descriptive designs include case studies, surveys, and naturalistic observation. The goal of these designs is to get a picture of the current thoughts, feelings, or behaviours in a given group of people. Descriptive research is summarized using descriptive statistics.
- Correlational research designs measure two or more relevant variables and assess a relationship between or among them. The variables may be presented on a scatter plot to visually show the relationships. The Pearson Correlation Coefficient ( $r$ ) is a measure of the strength of linear relationship between two variables.
- Common-causal variables may cause both the predictor and outcome variable in a correlational design, producing a spurious relationship. The possibility of common-causal variables makes it impossible to draw causal conclusions from correlational research designs.
- Experimental research involves the manipulation of an independent variable and the measurement of a dependent variable. Random assignment to

- Outline and explain the similarities and differences among the different theories of dreaming.
- Summarize the major psychoactive drugs and their influences on consciousness and behaviour.
- Review the evidence regarding the dangers of recreational drugs.
- Review the ways that people may alter consciousness without using drugs.

### **Growing and Developing**

- Review the stages of prenatal development.
- Explain how the developing embryo and fetus may be harmed by the presence of teratogens and describe what a mother can do to reduce her risk.
- Describe the abilities that newborn infants possess and how they actively interact with their environments.
- List the stages in Piaget's model of cognitive development and explain the concepts that are mastered in each stage.
- Critique Piaget's theory of cognitive development and describe other theories that complement and expand on it.
- Summarize the important processes of social development that occur in infancy and childhood.
- Summarize the physical and cognitive changes that occur for boys and girls during adolescence.
- Explain how adolescents develop a sense of morality and of self-identity.
- Review the physical and cognitive changes that accompany early and middle adulthood.
- Review the physical, cognitive, and social changes that accompany late adulthood.
- Describe the psychological and physical outcomes of bereavement.

- conditions is normally used to create initial equivalence between the groups, allowing researchers to draw causal conclusions.
- Research is said to be valid when the conclusions drawn by the researcher are legitimate. Because all research has the potential to be invalid, no research ever "proves" a theory or research hypothesis.
  - Construct validity, statistical conclusion validity, internal validity, and external validity are all types of validity that people who read and interpret research need to be aware of.
  - Construct validity refers to the assurance that the measured variables adequately measure the conceptual variables.
  - Statistical conclusion validity refers to the assurance that inferences about statistical significance are appropriate.
  - Internal validity refers to the assurance that the independent variable has caused the dependent variable. Internal validity is greater when confounding variables are reduced or eliminated.
  - External validity is greater when effects can be replicated across different manipulations, measures, and populations. Scientists use meta-analyses to better understand the external validity of research.
  - The central nervous system (CNS) is the collection of neurons that make up the brain and the spinal cord.
  - The peripheral nervous system (PNS) is the collection of neurons that link the CNS to our skin, muscles, and glands.
  - Neurons are specialized cells, found in the nervous system, which transmit information. Neurons contain a dendrite, a soma, and an axon.
  - Some axons are covered with a fatty substance known as the myelin sheath, which surrounds the axon, acting as an insulator and allowing faster transmission of the electrical signal.
  - The dendrite is a treelike extension that receives information from other neurons and transmits electrical stimulation to the soma.
  - The axon is an elongated fibre that transfers information from the soma to the terminal buttons.
  - Neurotransmitters relay information chemically from the terminal buttons and across the synapses to the receiving dendrites using a lock and key type of system.
  - The many different neurotransmitters work together to influence cognition, memory, and behaviour.
  - Agonists are drugs that mimic the actions of neurotransmitters, whereas antagonists are drugs that block the actions of neurotransmitters.
  - The old brain — including the brain stem, medulla, pons, reticular formation, thalamus, cerebellum, amygdala, hypothalamus, and hippocampus —

regulates basic survival functions, such as breathing, moving, resting, feeding, emotions, and memory.

- The cerebral cortex, made up of billions of neurons and glial cells, is divided into the right and left hemispheres and into four lobes.
- The frontal lobe is primarily responsible for thinking, planning, memory, and judgment. The parietal lobe is primarily responsible for bodily sensations and touch. The temporal lobe is primarily responsible for hearing and language. The occipital lobe is primarily responsible for vision. Other areas of the cortex act as association areas, responsible for integrating information.
- The brain changes as a function of experience and potential damage in a process known as plasticity. The brain can generate new neurons through neurogenesis.
- The motor cortex controls voluntary movements. Body parts requiring the most control and dexterity take up the most space in the motor cortex.
- The sensory cortex receives and processes bodily sensations. Body parts that are the most sensitive occupy the greatest amount of space in the sensory cortex.
- The left cerebral hemisphere is primarily responsible for language and speech in most people, whereas the right hemisphere specializes in spatial and perceptual skills, visualization, and the recognition of patterns, faces, and melodies.
- The severing of the corpus callosum, which connects the two hemispheres, creates a “split-brain patient,” with the effect of creating two separate minds operating in one person.
- Studies with split-brain patients as research participants have been used to study brain lateralization.
- Neuroplasticity allows the brain to adapt and change as a function of experience or damage.
- Studying the brains of cadavers can lead to discoveries about brain structure, but these studies are limited because the brain is no longer active.
- Lesion studies are informative about the effects of lesions on different brain regions.
- Electrophysiological recording may be used in animals to directly measure brain activity.
- Measures of electrical activity in the brain, such as electroencephalography (EEG), are used to assess brainwave patterns and activity.
- Functional magnetic resonance imaging (fMRI) measures blood flow in the brain during different activities, providing information about the activity of neurons and thus the functions of brain regions.



- Transcranial magnetic stimulation (TMS) is used to temporarily and safely deactivate a small brain region, with the goal of testing the causal effects of the deactivation on behaviour.
- The body uses both electrical and chemical systems to create homeostasis.
- The CNS is made up of bundles of nerves that carry messages to and from the PNS.
- The peripheral nervous system is composed of the autonomic nervous system (ANS) and the peripheral nervous system (PNS). The ANS is further divided into the sympathetic (activating) and parasympathetic (calming) nervous systems. These divisions are activated by glands and organs in the endocrine system.
- Specific nerves, including sensory neurons, motor neurons, and interneurons, each have specific functions.
- The spinal cord may bypass the brain by responding rapidly using reflexes.
- The pituitary gland is a master gland, affecting many other glands.
- Hormones produced by the pituitary and adrenal glands regulate growth, stress, sexual functions, and chemical balance in the body.
- The adrenal glands produce epinephrine and norepinephrine, the hormones responsible for our reactions to stress.
- The sex hormones, testosterone, estrogen, and progesterone, play an important role in sex differences.
- Sensation is the process of receiving information from the environment through our sensory organs. Perception is the process of interpreting and organizing the incoming information so that we can understand it and react accordingly.
- Transduction is the conversion of stimuli detected by receptor cells to electrical impulses that are transported to the brain.
- Although our experiences of the world are rich and complex, humans — like all species — have their own adapted sensory strengths and sensory limitations.
- Sensation and perception work together in a fluid, continuous process.
- Our judgments in detection tasks are influenced by both the absolute threshold of the signal as well as our current motivations and experiences. Signal detection analysis is used to differentiate sensitivity from response biases.
- The difference threshold, or just noticeable difference, is the ability to detect the smallest change in a stimulus about 50% of the time. According to Weber's law, the just noticeable difference increases in proportion to the total intensity of the stimulus.
- Research has found that stimuli can influence behaviour even when they are presented below the absolute threshold (i.e., subliminally). The effectiveness

of subliminal advertising, however, has not been shown to be of large magnitude.

- Vision is the process of detecting the electromagnetic energy that surrounds us. Only a small fraction of the electromagnetic spectrum is visible to humans.
- The visual receptor cells on the retina detect shape, colour, motion, and depth.
- Light enters the eye through the transparent cornea and passes through the pupil at the centre of the iris. The lens adjusts to focus the light on the retina, where it appears upside down and backward. Receptor cells on the retina are excited or inhibited by the light and send information to the visual cortex through the optic nerve.
- The retina has two types of photoreceptor cells: rods, which detect brightness and respond to black and white, and cones, which respond to red, green, and blue. Colour blindness occurs when people lack function in the red- or green-sensitive cones.
- Feature detector neurons in the visual cortex help us recognize objects, and some neurons respond selectively to faces and other body parts.
- The Young-Helmholtz trichromatic colour theory proposes that colour perception is the result of the signals sent by the three types of cones, whereas the opponent-process colour theory proposes that we perceive colour as three sets of opponent colours: red-green, yellow-blue, and white-black.
- The ability to perceive depth occurs as the result of binocular and monocular depth cues.
- Motion is perceived as a function of the size and brightness of objects. The beta effect and the phi phenomenon are examples of perceived motion.
- Sound waves vibrating through media such as air, water, or metal are the stimulus energy that is sensed by the ear.
- The hearing system is designed to assess frequency (pitch) and amplitude (loudness).
- Sound waves enter the outer ear (the pinna) and are sent to the eardrum via the auditory canal.
- The resulting vibrations are relayed by the three ossicles, causing the oval window covering the cochlea to vibrate. The vibrations are detected by the cilia (hair cells) and sent via the auditory nerve to the auditory cortex.
- There are two theories as to how we perceive pitch: The frequency theory of hearing suggests that as a sound wave's pitch changes, nerve impulses of a corresponding frequency enter the auditory nerve. The place theory of hearing suggests that we hear different pitches because different areas of the cochlea respond to higher and lower pitches.

- Conductive hearing loss is caused by physical damage to the ear or eardrum and may be improved by hearing aids or cochlear implants. Sensorineural hearing loss, caused by damage to the hair cells or auditory nerves in the inner ear, may be produced by prolonged exposure to sounds of more than 85 decibels.
- The ability to taste, smell, and touch are important because they help us avoid harm from environmental toxins.
- The many taste buds on our tongues and inside our mouths allow us to detect six basic taste sensations: sweet, salty, sour, bitter, piquancy, and umami.
- In olfaction, transduction occurs as airborne chemicals that are inhaled through the nostrils are detected by receptors in the olfactory membrane. Different chemical molecules fit into different receptor cells, creating different smells.
- The ability to smell diminishes with age and, on average, women have a better sense of smell than men.
- We have a range of different nerve endings embedded in the skin, combinations of which respond to the four basic sensations of pressure, hot, cold, and pain. But only the sensation of pressure has its own specialized receptors.
- Proprioception is our ability to sense the positions and movements of our body parts. Postural and movement information is detected by special neurons located in the skin, joints, bones, ears, and tendons, which pick up messages from the compression and the contraction of muscles throughout the body.
- The vestibular system, composed of structures in the inner ear, monitors the head's position and movement, maintaining the body's balance.
- Gate control theory explains how large and small neurons work together to transmit and regulate the flow of pain to the brain.
- Sensory interaction occurs when different senses work together, for instance, when taste, smell, and touch together produce the flavour of food.
- Selective attention allows us to focus on some sensory experiences while tuning out others.
- Sensory adaptation occurs when we become less sensitive to some aspects of our environment, freeing us to focus on more important changes.
- Perceptual constancy allows us to perceive an object as the same, despite changes in sensation.
- Cognitive illusions are examples of how our expectations can influence our perceptions.
- Our emotions, motivations, desires, and even our culture can influence our perceptions.
- Consciousness, our subjective awareness of ourselves and our environment, is functional because it allows us to plan activities and monitor our goals.

- Psychologists believe that consciousness is the result of neural activity in the brain.
- Human and animal behaviour is influenced by biological rhythms, including annual, monthly, and circadian rhythms.
- Sleep consists of two major stages: REM and non-REM sleep. Non-REM sleep has three substages, N1, N2, and N3.
- Each sleep stage is marked by a specific pattern of biological responses and brainwaves.
- Sleep is essential for adequate functioning during the day. Sleep disorders, including insomnia, sleep apnea, and narcolepsy, may make it hard for us to sleep well.
- Dreams occur primarily during REM sleep. Some theories of dreaming, such as Freud's, are based on the content of the dreams. Other theories of dreaming propose that dreaming is related to memory consolidation. The activation-synthesis theory of dreaming is based only on neural activity.
- Psychoactive drugs are chemicals that change our state of consciousness. They work by influencing neurotransmitters in the CNS.
- Using psychoactive drugs may create tolerance and, when they are no longer used, withdrawal. Addiction may result from tolerance and the difficulty of withdrawal.
- Stimulants, including caffeine, nicotine, and amphetamines, increase neural activity by blocking the reuptake of dopamine, norepinephrine, and serotonin in the CNS.
- Depressants, including alcohol, barbiturates, and benzodiazepines, decrease consciousness by increasing the production of the neurotransmitter GABA and decreasing the production of the neurotransmitter acetylcholine.
- Opioids, including codeine, opium, morphine, and heroin, produce euphoria and analgesia by increasing activity in opioid receptor neurons.
- Hallucinogens, including cannabis, mescaline, and LSD, create an extreme alteration of consciousness as well as the possibility of hallucinations.
- Recreational drug use is influenced by social norms as well as by individual differences. People who are more likely to take risks are also more likely to use drugs.
- Hypnosis is a trancelike state of consciousness consisting of heightened susceptibility, deep relaxation, and intense focus.
- Hypnosis is not useful for helping people remember past events, but it can be used to alleviate anxiety and pain.
- Sensory deprivation is the intentional reduction of stimulation to one or more of the senses. It can be used therapeutically to treat insomnia, muscle tension, and pain.

- Meditation refers to a range of techniques that can create relaxation and well-being.
- Development begins at the moment of conception, when the sperm from the father merges with the egg from the mother.
- Within a span of nine months, development progresses from a single cell into a zygote and then into an embryo and fetus.
- The fetus is connected to the mother through the umbilical cord and the placenta, which allow the fetus and mother to exchange nourishment and waste. The fetus is protected by the amniotic sac.
- The embryo and fetus are vulnerable and may be harmed by the presence of teratogens.
- Smoking, alcohol use, and drug use are all likely to be harmful to the developing embryo or fetus, and the mother should entirely refrain from these behaviours during pregnancy or if she expects to become pregnant.
- Environmental factors, especially homelessness and poverty, have a substantial negative effect on healthy child development.
- Babies are born with a variety of skills and abilities that contribute to their survival, and they also actively learn by engaging with their environments.
- The habituation technique is used to demonstrate the newborn's ability to remember and learn from experience.
- Children use both assimilation and accommodation to develop functioning schemas of the world.
- Piaget's theory of cognitive development proposes that children develop in a specific series of sequential stages: sensorimotor, preoperational, concrete operational, and formal operational.
- Piaget's theories have had a major impact, but they have also been critiqued and expanded.
- Social development requires the development of a secure base from which children feel free to explore.
- Attachment styles refer to the security of this base and more generally to the type of relationship that people, and especially children, develop with those who are important to them.
- Longitudinal and cross-sectional studies are each used to test hypotheses about development, and each approach has advantages and disadvantages.
- Adolescence is the period of time between the onset of puberty and emerging adulthood.
- Emerging adulthood is the period from age 18 years until the mid-20s in which young people begin to form bonds outside the family, attend university, and find work. Even so, they tend not to be fully independent and have not taken

on all the responsibilities of adulthood. This stage is most prevalent in Western cultures.

- Puberty is a developmental period in which hormonal changes cause rapid physical alterations in the body.
- The cerebral cortex continues to develop during adolescence and early adulthood, enabling improved reasoning, judgment, impulse control, and long-term planning.
- A defining aspect of adolescence is the development of a consistent and committed self-identity
- The process of developing an identity can take time but most adolescents succeed in developing a stable identity.
- Kohlberg's theory proposes that moral reasoning is divided into the following stages: preconventional morality, conventional morality, and postconventional morality.
- Kohlberg's theory of morality has been expanded and challenged, particularly by Gilligan, who has focused on differences in morality between boys and girls.
- It is in early and middle adulthood that muscle strength, reaction time, cardiac output, and sensory abilities begin to decline.
- One of the key signs of aging in women is the decline in fertility, culminating in menopause, which is marked by the cessation of the menstrual period.
- The different social stages in adulthood, such as marriage, parenthood, and work, are loosely determined by a social clock, a culturally recognized time for each phase.
- Most older adults maintain an active lifestyle, remain as happy as they were when younger, or happier, and increasingly value their social connections with family and friends.
- Although older adults have slower cognitive processing overall (fluid intelligence), their experience in the form of crystallized intelligence — or existing knowledge about the world and the ability to use it — is maintained and even strengthened during old age.
- Expectancies about change in aging vary across cultures and may influence how people respond to getting older.
- A portion of the elderly suffer from age-related brain diseases, such as dementia, a progressive neurological disease that includes significant loss of cognitive abilities, and Alzheimer's disease, a fatal form of dementia that is related to changes in the cerebral cortex.
- Two significant social stages in late adulthood are retirement and dealing with grief and bereavement. Studies show that a well-planned retirement can be a pleasant experience.

- A significant number of people going through the grieving process are at increased risk of mortality and physical and mental illness, but grief counselling can be effective in helping these people cope with their loss.

## Content – Elaborations

- **psychology:** the scientific study of mind and behaviour
- **data:** any information collected through formal observation or measurement
- **hindsight bias:** the tendency to think that we could have predicted something that has already occurred that we probably would not have been able to predict
- **empirical methods:** the processes of collecting and organizing data and drawing conclusions about those data
- **scientific method:** the set of assumptions, rules, and procedures that scientists use to conduct empirical research
- **facts:** objective statements determined to be accurate through empirical study
- **dualism:** that the mind is fundamentally different from the mechanical body
- **structuralism:** a school of psychology whose goal was to identify the basic elements or structures of psychological experience
- **introspection:** involves asking research participants to describe exactly what they experience as they work on mental tasks
- **school of functionalism:** aimed to understand why animals and humans have developed the particular psychological aspects that they currently possess
- **evolutionary psychology:** a branch of psychology that applies the Darwinian theory of natural selection to human and animal behaviour
- **fitness:** refers to the extent to which having a given characteristic helps the individual organism survive and reproduce at a higher rate than do other members of the species who do not have the characteristic
- **psychodynamic psychology:** an approach to understanding human behaviour that focuses on the role of unconscious thoughts, feelings, and memories revealed through talk therapy and dream analysis
- **behaviourism:** a school of psychology that is based on the premise that it is not possible to objectively study the mind, and therefore that psychologists should limit their attention to the study of behaviour itself
- **cognitive psychology:** a field of psychology that studies mental processes, including perception, thinking, memory, and judgment
- **neuroimaging:** the use of various techniques to provide pictures of the structure and function of the living brain
- **social-cultural psychology:** the study of how the social situations and the cultures in which people find themselves influence thinking and behaviour
- **conformity:** the process by which people frequently change their beliefs and behaviours to be similar to those of the people they care about
- **culture:** the common set of social norms, including religious and family values and other moral beliefs, shared by the people who live in a geographical region
- **individualism:** values the self and one's independence from others
- **collectivism:** focuses on developing harmonious social relationships with others
- **paradigm:** prevailing model or way of looking at something
- **integrative psychology:** psychology that combines the nature and actions of mind, body, and spirit
- **biological psychologists** are interested in measuring biological, physiological, or genetic variables in an attempt to relate them to psychological or behavioural variables

## Content – Elaborations

- **introspection**, which involves training people to concentrate and report on their conscious experiences as they react to stimuli
- **reductionist**: the belief that the simple is the source of the complex. In other words, to explain a complex phenomenon (like human behaviour) a person needs to reduce it to its elements.
- **holist**: the whole is more than the sum of the parts
- **cognitive psychologists** rely on the functionalist insights in discussing how affect, or emotion, and environment or events interact and result in specific perceptions
- **frontal lobe**: also known as the motor cortex, this portion of the brain is involved in motor skills, higher level cognition, and expressive language
- **occipital lobe**: also known as the visual cortex, this portion of the brain is involved in interpreting visual stimuli and information
- **parietal lobe**: also known as the somatosensory cortex, this portion of the brain is involved in the processing of other tactile sensory information such as pressure, touch, and pain
- **temporal lobe**: also known as the auditory cortex, this portion of the brain is involved in the interpretation of the sounds and language we hear
- **peripheral nervous system**: another part of the nervous system that comprises of two parts:
  - **somatic nervous system**, which controls the actions of skeletal muscles.
  - **autonomic nervous system**, which regulates automatic processes such as heart rate, breathing, and blood pressure
- **sympathetic nervous system**: controls the fight-or-flight response, a reflex that prepares the body to respond to danger in the environment
- **parasympathetic nervous system**: works to bring the body back to its normal state after a fight-or-flight response
- **visual attention**: the brain's ability to selectively filter unattended or unwanted information from reaching awareness
- **psychodynamic perspective**: proposes that there are psychological forces underlying human behaviour, feelings, and emotions
- **consciousness**: the awareness of the self in space and time
- **conscious**: this level consists of all those things we are aware of, including things that we know about ourselves and our surroundings
- **preconscious**: this level consists of those things we could pay conscious attention to if we so desired, and where many memories are stored for easy retrieval
- **unconscious**: consists of those things that are outside of conscious awareness, including many memories, thoughts, and urges of which we are not aware
- **developmental psychologists**: view consciousness not as a single entity, but as a developmental process with potential higher stages of cognitive, moral, and spiritual quality
- **social psychologists**: view consciousness as a product of cultural influence having little to do with the individual
- **neuropsychologists**: view consciousness as ingrained in neural systems and organic brain structures
- **cognitive psychologists**: base their understanding of consciousness on computer science
- **psychoanalysis**: a type of analysis that involves attempting to affect behavioural change through having patients talk about their difficulties
- **anima**: the archetype symbolizing the unconscious female component of the male psyche
- **animus**: the archetype symbolizing the unconscious male component of the female psyche
- **self**: the archetype symbolizing the totality of the personality; represents the striving for unity, wholeness, and integration
- **persona**: the mask or image a person presents to the world; designed to make a particular impression on others, while concealing a person's true nature
- **shadow**: the side of a personality that a person does not consciously display in public
- **dreams**: specific expressions of the unconscious that have a definite, purposeful structure indicating an underlying idea or intention



## Content – Elaborations

- **complexes:** usually unconscious and repressed emotionally toned symbolic material that is incompatible with consciousness
- **individuation:** the process of integrating the conscious with the unconscious, synergizing the many components of the psyche
- **introvert:** inner-directed; needs privacy and space; chooses solitude to recover energy; often reflective
- **extravert:** outer-directed; needs sociability; chooses people as a source of energy; often action-oriented
- **thinking function:** logical; sees cause and effect relations; cool, distant, frank, and questioning
- **feeling function:** creative, warm, intimate; has a sense of valuing positively or negatively
- **sensing function:** Sensory; oriented toward the body and senses; detailed, concrete, and present
- **intuitive:** sees many possibilities in situations; goes with hunches; impatient with earthy details; impractical; sometimes not present
- **behaviourism** focuses on observable behaviour as a means to studying the human psyche
- **classical conditioning:** as we learn, we alter the way we perceive our environment, the way we interpret the incoming stimuli, and therefore the way we interact, or behave
- **operant conditioning:** another type of learning that refers to how an organism operates on the environment or how it responds to what is presented to it in the environment
- **reinforcement:** refers to any stimulus which strengthens or increases the probability of a specific response
- **positive reinforcement:** involves adding something in order to increase a response
- **negative reinforcement:** involves taking something negative away in order to increase a response
- **punishment:** refers to adding something aversive in order to decrease a behaviour
- **extinction** involves removing something in order to decrease a behaviour
- **gamification:** applying game incentives such as prompts, competition, badges, and rewards to ordinary activities
- **humanistic psychology:** holds a hopeful, constructive view of human beings and of their substantial capacity to be self-determining
- **person/client-centred therapy:** provides a supportive environment in which clients can re-establish their true identity; relies on clients' capacity for self-direction, empathy, and acceptance to promote clients' development
- **existential therapy:** focuses on how the client has answered life's questions in the past, but attention ultimately emphasizes the choices to be made in the present and future and enabling a new freedom and responsibility to act
- **gestalt therapy:** focuses on the skills and techniques that permit an individual to be more aware of their feelings; focuses on the here and now
- **cognitive psychology:** the study of mental processes such as attention, memory, perception, language use, problem solving, creativity, and thinking
- **cognitive behaviour therapy (CBT):** focuses on helping individuals challenge their patterns and beliefs and replace erroneous thinking
- **attention:** a state of focused awareness on a subset of the available perceptual information
- **procedural memory:** memory for the performance of particular types of action, is often activated on a subconscious level, or at most requires a minimal amount of conscious effort (e.g., driving to work along the same route)
- **semantic memory:** the encyclopedic knowledge that a person possesses, such as what the Eiffel Tower looks like, or the name of a friend from Grade 6
- **episodic memory:** memory of autobiographical events that can be explicitly stated, contains all memories that are temporal in nature, such as when you last brushed your teeth, or where you were when you heard about a major news event
- **metacognition:** involves conscious thought about thought processes
- **evolutionary psychology:** seeks to develop and understand ways of expanding the emotional connection between individuals and the natural world

## Content – Elaborations

- **basic research:** research that answers fundamental questions about behaviour
- **applied research:** research that investigates issues that have implications for everyday life and provides solutions to everyday problems
- **empirical:** based on systematic collection and analysis of data
- **scientific method:** the set of assumptions, rules, and procedures scientists use to conduct research
- **objective:** free from the personal bias or emotions of the scientist
- **replicate:** the ability to repeat, add to, or modify previous research findings
- **laws:** principles that are so general as to apply to all situations in a given domain of inquiry
- **theory:** an integrated set of principles that explains and predicts many, but not all, observed relationships within a given domain of inquiry
- **research hypothesis:** a specific and falsifiable prediction about the relationship between or among two or more variables
- **operational definition:** a precise statement of how a conceptual variable is turned into a measured variable
- **Ethical Review Board (ERB):** a committee of at least five members whose goal it is to determine the cost-benefit ratio of research conducted within an institution
- **research design:** the specific method a researcher uses to collect, analyze, and interpret data
- **descriptive research:** research designed to provide a snapshot of the current state of affairs
- **correlational research:** research designed to discover relationships among variables and to allow the prediction of future events from present knowledge
- **experimental research:** research in which initial equivalence among research participants in more than one group is created, followed by a manipulation of a given experience for these groups and a measurement of the influence of the manipulation
- **case studies:** descriptive records of one or more individual's experiences and behaviour
- **survey:** a measure administered through either an interview or a written questionnaire to get a picture of the beliefs or behaviours of a sample of people of interest
- **naturalistic observation:** research based on the observation of everyday events
- **correlational research:** involves the measurement of two or more relevant variables and an assessment of the relationship between or among those variables
- **independent variable:** the causing variable that is created (manipulated) by the experimenter
- **dependent variable:** a measured variable that is expected to be influenced by the experimental manipulation
- **valid:** the conclusions drawn by the researcher are legitimate
- **construct validity:** refers to the extent to which the variables used in the research adequately assess the conceptual variables they were designed to measure.
- **reliability:** refers to the consistency of a measured variable
- **statistical significance:** refers to the confidence with which a scientist can conclude that data are not due to chance or random error
- **statistical conclusion validity:** refers to the extent to which we can be certain that the researcher has drawn accurate conclusions about the statistical significance of the research
- **internal validity:** refers to the extent to which we can trust the conclusions that have been drawn about the causal relationship between the independent and dependent variables
- **experimenter bias:** a situation in which the experimenter subtly treats the research participants in the various experimental conditions differently, resulting in an invalid confirmation of the research hypothesis

## Content – Elaborations

- **blind to condition:** although the experimenters know the research hypotheses, they do not know which conditions the participants are assigned to
- **double-blind experiment:** both the researcher and the research participants are blind to condition
- **generalization:** refers to the extent to which relationships among conceptual variables can be demonstrated in a wide variety of people and a wide variety of manipulated or measured variables
- **replication:** the process of repeating previous research
- **meta-analysis:** is a statistical technique that uses the results of existing studies to integrate and draw conclusions about those studies
- **nervous system:** a collection of hundreds of billions of specialized and interconnected cells through which messages are sent between the brain and the rest of the body
- **central nervous system (CNS):** made up of the brain and the spinal cord
- **peripheral nervous system (PNS):** the neurons that link the CNS to our skin, muscles, and glands
- **endocrine system:** the chemical regulator of the body that consists of glands that secrete hormones
- **neuron:** a cell in the nervous system whose function it is to receive and transmit information
- **soma:** a cell body which contains the nucleus of the cell and keeps the cell alive
- **dendrite:** a branching treelike fibre which collects information from other cells and sends the information to the soma
- **axon:** a long, segmented fibre which transmits information away from the cell body toward other neurons or to the muscles and glands
- **myelin sheath:** a layer of fatty tissue surrounding the axon of a neuron that both acts as an insulator and allows faster transmission of the electrical signal
- **synapses:** areas where the terminal buttons at the end of the axon of one neuron nearly, but don't quite, touch the dendrites of another
- **neurotransmitter:** a chemical that relays signals across the synapses between neurons
- **brain stem:** the oldest and innermost region of the brain; designed to control the most basic functions of life, including breathing, attention, and motor responses
- **medulla:** the area of the brain stem that controls heart rate and breathing
- **pons:** a structure in the brain stem that helps control the movements of the body, playing a particularly important role in balance and walking
- **thalamus:** the egg-shaped structure above the brain stem that applies still more filtering to the sensory information that is coming up from the spinal cord and through the reticular formation, and it relays some of these remaining signals to the higher brain levels
- **cerebellum:** (literally, "little brain") consists of two wrinkled ovals behind the brain stem; it functions to coordinate voluntary movement
- **limbic system:** a brain area, located between the brain stem and the two cerebral hemispheres, that governs emotion and memory
- **amygdala:** consists of two "almond-shaped" clusters (amygdala comes from the Latin word for "almond") and is primarily responsible for regulating our perceptions of, and reactions to, aggression and fear
- **hypothalamus:** a brain structure that contains a number of small areas that perform a variety of functions, including the regulation of hunger and sexual behaviour, as well as linking the nervous system to the endocrine system via the pituitary gland
- **hippocampus:** consists of two "horns" that curve back from the amygdala
- **cerebral cortex:** the outer bark-like layer of our brain that allows us to so successfully use language, acquire complex skills, create tools, and live in social groups
- **glial cells:** cells that surround and link to the neurons, protecting them, providing them with nutrients, and absorbing unused neurotransmitters
- **frontal lobe:** (behind the forehead), which is responsible primarily for thinking, planning, memory, and judgment
- **parietal lobe:** responsible primarily for processing information about touch

## Content – Elaborations

- **occipital lobe:** processes visual information
- **temporal lobe:** responsible primarily for hearing and language
- **neuroplasticity:** refers to the brain's ability to change its structure and function in response to experience or damage
- **neurogenesis:** the forming of new neurons
- **lesions:** damages in the brain
- **electroencephalography (EEG):** a technique that records the electrical activity produced by the brain's neurons through the use of electrodes that are placed around the research participant's head
- **functional magnetic resonance imaging (fMRI):** a type of brain scan that uses a magnetic field to create images of brain activity in each brain area
- **transcranial magnetic stimulation (TMS):** a procedure in which magnetic pulses are applied to the brain of a living person with the goal of temporarily and safely deactivating a small brain region
- **Nerves:** bundles of interconnected neurons that fire in synchrony to carry messages
- **central nervous system (CNS):** made up of the brain and spinal cord, is the major controller of the body's functions, charged with interpreting sensory information and responding to it with its own directives
- **spinal cord:** the long, thin, tubular bundle of nerves and supporting cells that extends down from the brain
- **reflex:** an involuntary and nearly instantaneous movement in response to a stimulus
- **peripheral nervous system (PNS):** links the CNS to the body's sense receptors, muscles, and glands
- **autonomic nervous system (ANS):** the division of the PNS that governs the internal activities of the human body, including heart rate, breathing, digestion, salivation, perspiration, urination, and sexual arousal
- **somatic nervous system (SNS):** the division of the PNS that controls the external aspects of the body
- **gland:** groups of cells that function to secrete hormones
- **hormone:** a chemical that moves throughout the body to help regulate emotions and behaviours
- **sensation:** awareness resulting from the stimulation of a sense organ
- **perception:** the organization and interpretation of sensations
- **six senses:** seeing, hearing, smelling, touching, tasting, and monitoring the body's positions
- **transduction:** the conversion of stimuli detected by receptor cells to electrical impulses that are then transported to the brain
- **psychophysics** is the branch of psychology that studies the effects of physical stimuli on sensory perceptions and mental states
- **absolute threshold of a sensation:** the intensity of a stimulus that allows an organism to just barely detect it
- **signal detection analysis:** a technique used to determine the ability of the perceiver to separate true signals from background noise
- **sensitivity:** refers to the true ability of the individual to detect the presence or absence of signals
- **response bias:** refers to a behavioural tendency to respond "yes" to the trials, which is independent of sensitivity
- **difference threshold:** refers to the change in a stimulus that can just barely be detected by the organism
- **Weber's law:** maintains that the just noticeable difference of a stimulus is a constant proportion of the original intensity of the stimulus
- **blindsight:** a condition in which people are unable to consciously report on visual stimuli but nevertheless are able to accurately answer questions about what they are seeing
- **electromagnetic energy:** pulses of energy waves that can carry information from place to place
- **wavelength:** the distance between one wave peak and the next wave peak our eyes detect only the range from about 400 to 700 billionths of a meter

## Content – Elaborations

- **visual accommodation:** the process of changing the curvature of the lens to keep the light entering the eye focused on the retina
- **feature detector neurons:** specialized neurons, located in the visual cortex, that respond to the strength, angles, shapes, edges, and movements of a visual stimulus
- **gestalt:** a meaningfully organized whole
- **beta effect:** refers to the perception of motion that occurs when different images are presented next to each other in succession
- **phi phenomenon:** when we perceive a sensation of motion caused by the appearance and disappearance of objects that are near each other
- **frequency:** the number of waves that arrive per second
- **pitch:** the perceived frequency of a sound
- **amplitude:** height of the sound wave
- **loudness:** the degree of sound volume
- **decibel:** the unit of relative loudness
- **taste buds:** designed to sense chemicals in the mouth
- **olfactory membrane:** the upper nasal passage
- **olfactory receptor cells:** contain tentacle-like protrusions that contain receptor proteins
- **proprioception:** the ability to sense the position and movement of our body parts
- **vestibular system:** a set of liquid-filled areas in the inner ear that monitors the head's position and movement, maintaining the body's balance
- **gate control theory of pain:** proposes that pain is determined by the operation of two types of nerve fibres in the spinal cord
- **sensory interaction:** the working together of different senses to create experience
- **McGurk effect:** an error in perception that occurs when we misperceive sounds because the audio and visual parts of the speech are mismatched
- **synesthesia:** an experience in which one sensation (e.g., hearing a sound) creates experiences in another (e.g., vision)
- **selective attention:** the ability to focus on some sensory inputs while tuning out others
- **sensory adaptation:** a decreased sensitivity to a stimulus after prolonged and constant exposure
- **perceptual constancy:** the ability to perceive a stimulus as constant despite changes in sensation
- **illusions:** occur when the perceptual processes that normally help us correctly perceive the world around us are fooled by a particular situation so that we see something that does not exist or that is incorrect
- **Mueller-Lyer illusion:** an illusion where the line segment in the bottom arrow looks longer to us than the one on the top, even though they are both actually the same length
- **moon illusion:** refers to the fact that the moon is perceived to be about 50% larger when it is near the horizon than when it is seen overhead, despite the fact that in both cases the moon is the same size
- **human factors:** the field of psychology that uses psychological knowledge, including the principles of sensation and perception, to improve the development of technology
- **consciousness:** our subjective awareness of ourselves and our environment
- **dualism:** the idea that the mind, a nonmaterial entity, is separate from (although connected to) the physical body
- **biological rhythms:** regularly occurring cycles of behaviour
- **seasonal affective disorder (SAD):** depression during the dark winter months rather than during the lighter summer months
- **rapid eye movement (REM):** a sleep stage characterized by the presence of quick eye movements and dreaming
- **non-rapid eye movement (non-REM):** a deep sleep, characterized by very slow brainwaves



## Content – Elaborations

- **insomnia:** persistent difficulty falling or staying asleep
- **sleep apnea:** a sleep disorder characterized by pauses in breathing that last at least 10 seconds during sleep
- **narcolepsy:** a disorder characterized by extreme daytime sleepiness with frequent episodes of nodding off
- **somnambulism:** (sleepwalking); the person leaves the bed and moves around while still asleep
- **sleep terrors:** a disruptive sleep disorder, most frequently experienced in childhood, that may involve loud screams and intense panic
- **dreams:** the succession of images, thoughts, sounds, and emotions that passes through our minds while sleeping
- **wish fulfilment:** the idea that dreaming allows us to act out the desires that we must repress during the day
- **activation-synthesis theory of dreaming:** the idea that dreams are our brain's interpretation of the random firing of neurons in the brain stem
- **psychoactive drug:** a chemical that changes our states of consciousness, and particularly our perceptions and moods
- **tolerance:** an increase in the dose of a drug required to produce the same effect
- **dependence:** a need to use a drug or other substance regularly
- **withdrawal:** negative experiences that accompany reducing or stopping drug use, including physical pain and other symptoms; when the user powerfully craves the drug and is driven to seek it out, over and over again, no matter what the physical, social, financial, and legal cost
- **safety ratio:** the dose that is likely to be fatal divided by the normal dose needed to feel the effects of the drug
- **stimulant:** a psychoactive drug that operates by blocking the reuptake of dopamine, norepinephrine, and serotonin in the synapses of the CNS
- **caffeine:** a bitter psychoactive drug found in the beans, leaves, and fruits of plants
- **nicotine:** a psychoactive drug found in tobacco and other members of the nightshade family of plants, where it acts as a natural pesticide
- **cocaine** an addictive drug obtained from the leaves of the coca plant
- **amphetamine:** a stimulant that produces increased wakefulness and focus, along with decreased fatigue and appetite
- **depressant:** a psychoactive drug that reduces the activity of the CNS
- **alcohol:** a colorless liquid, produced by the fermentation of sugar or starch, that is the intoxicating agent in fermented drinks
- **barbiturates:** depressants that are commonly prescribed as sleeping pills and painkillers
- **benzodiazepines:** a family of depressants used to treat anxiety, insomnia, seizures, and muscle spasms
- **toxic inhalants:** depressants that are inhaled to create a change in consciousness
- **opioids:** chemicals that increase activity in opioid receptor neurons in the brain and in the digestive system, producing euphoria, analgesia, slower breathing, and constipation
- **opium:** the dried juice of the unripe seed capsule of the opium poppy
- **hallucinogens:** psychoactive drugs that alter sensation and perception and that may create hallucinations
- **hypnosis:** a trancelike state of consciousness, usually induced by a procedure known as hypnotic induction, which consists of heightened suggestibility, deep relaxation, and intense focus
- **sensory deprivation:** the intentional reduction of stimuli affecting one or more of the five senses, with the possibility of resulting changes in consciousness
- **meditation:** refers to techniques in which the individual focuses on something specific, such as an object, a word, or one's breathing, with the goal of ignoring external distractions, focusing on one's internal state, and achieving a state of relaxation and well-being
- **development:** the physiological, behavioural, cognitive, and social changes that occur throughout human life, which are guided by both genetic predispositions (nature) and by environmental influences (nurture)
- **infancy:** the developmental stage that begins at birth and continues to one year of age

## Content – Elaborations

- **childhood:** the period between infancy and the onset of puberty
- **adolescence:** the years between the onset of puberty and the beginning of adulthood
- **adulthood:** the years between emerging, early, middle, and older adulthood and the preparations for and eventual facing of death
- **conception:** occurs when an egg from the mother is fertilized by a sperm from the father
- **ovulation:** when an ovum, or egg (the largest cell in the human body), which has been stored in one of the mother's two ovaries, matures and is released into the fallopian tube
- **zygote:** a fertilized ovum
- **embryo:** when the zygote attaches to the wall of the uterus
- **amniotic sac:** the fluid-filled reservoir in which the embryo (soon to be known as a fetus) will live until birth, and which acts as both a cushion against outside pressure and as a temperature regulator
- **placenta:** an organ that allows the exchange of nutrients between the embryo and the mother, while at the same time filtering out harmful material
- **umbilical cord:** links the embryo directly to the placenta and transfers all material to the fetus
- **teratogens:** substances that can harm the fetus
- **fetal alcohol syndrome (FAS):** a condition caused by maternal alcohol drinking that can lead to numerous detrimental developmental effects, including limb and facial abnormalities, genital anomalies, and mental retardation
- **schemas:** patterns of knowledge in long term memory — that help individuals to remember, organize, and respond to information
- **assimilation:** the use already developed schemas to understand new information
- **accommodation:** involves learning new information and thus changing the schema
- **sensorimotor stage:** the cognitive stage that begins at birth and lasts until around the age of two; defined by the direct physical interactions that babies have with the objects around them
- **object permanence:** refers to the child's ability to know that an object exists even when the object cannot be perceived
- **preoperational stage:** during this stage, children begin to use language and to think more abstractly about objects, with capacity to form mental images; however, their understanding is more intuitive and they lack much ability to deduce or reason
- **egocentric:** unable to readily see and understand other people's viewpoints
- **theory of mind:** the ability to take another person's viewpoint
- **concrete operational stage:** marked by more frequent and more accurate use of transitions, operations, and abstract concepts, including those of time, space, and numbers
- **formal operational stage:** marked by the ability to think in abstract terms and to use scientific and philosophical lines of thought
- **sociocultural theory:** believes that cognitive development is not isolated entirely within the child but occurs at least in part through social interactions
- **community learning:** when children serve as both teachers and learners
- **self-concept:** a knowledge representation or schema that contains knowledge about us, including our beliefs about our personality traits, physical characteristics, abilities, values, goals, and roles
- **social comparison:** the knowledge that we exist as individuals allows us to make comparisons with other children
- **attachment:** the emotional bonds that we develop with those with whom we feel closest, and particularly the bonds that an infant develops with the mother or primary caregiver
- **temperament:** the innate personality characteristics of the infant

## Content – Elaborations

- **puberty:** developmental period in which hormonal changes cause rapid physical alterations in the body, culminating in sexual maturity
- **morality:** standards of behaviour that are generally agreed on within a culture to be right or proper
- **early adulthood:** roughly the ages between 25 and 45
- **middle adulthood:** roughly the ages between 45 and 65
- **social clock:** refers to the culturally preferred “right time” for major life events, such as moving out of the childhood house, getting married, and having children
- **late adulthood:** the final life stage, beginning in the 60s
- **crystallized intelligence:** general knowledge about the world, as reflected in semantic knowledge, vocabulary, and language
- **fluid intelligence:** the ability to think and acquire information quickly and abstractly
- **dementia:** a progressive neurological disease that includes loss of cognitive abilities significant enough to interfere with everyday behaviours
- **Alzheimer’s disease:** a form of dementia that, over a period of years, leads to a loss of emotions, cognitions, and physical functioning, and that is ultimately fatal

### Recommended Instructional Components:

- Online and blended instruction
- Inquiry/project based learning
- Reader/viewer responses
- Reflective writing

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

- Learning Guides
- Self-assessments
- Inquiry/Project Based Activities
- Quizzes
- Final Project

### Learning Resources:

There is no physical textbook for this course. The material in each section of the course is taken from [Introduction to Psychology](#) – 1st Canadian Edition by Charles Stangor and Jennifer Walinga.

There is a Student Resource section in the course for students to access some common resources for the course: APA Essay Formatting and the entire textbook online.



**Additional Information:**

None