People	
Albert Bandura	Added a cognitive slant to behaviorism by researching violence and aggression
B.F. Skinner	Believed that internal mental events could only be studied scientifically or not at all; Skinner box
Carl Rogers	Developed person-centered therapy
Charles Darwin	Theory of natural selection and said desirable traits are passed on
David Hubel and Torsten Wiesel	Identified specialized types of cells and that individual cells are more sensitive to complex stimuli
Ernest Hilgard	Hypnosis causes dissociation in consciousness
Gustav Fechner	Published research on the absolute threshold of humans
Herman von Helmholtz	Created place theory
J. Allan Hobson	Said dreams are side effects of neural activation
John Watson	Founder of behaviorism
Leta Stetter Hollingworth	Focused on children with high IQs

People (cont)	
Linda Bastoshuk	Leading authority in taste research
Margaret Washburn	Second female president of APA and wrote "The Animal Mind" which helped behaviorism emerge
Mary Calkins	First female president of APA and founded 1/12 psychology labs in the U.S.
Max Wertheimer	Discovered phi phenomenon
Neal Miller	Conducted studies to show that animals could be used for testing
Robert Rosenthal	Said experimental bias could lead to influence on subject's behavior
Roger Sperry and Michael Gazzaniga	Studied split-brain to see what makes the hemispheres unique
Ronald Melzack and Patrick Wall	Gate-control theory
Rosalind Cartwright	We tend to dream about problems in our lives
Sigmund Freud	Founder of psychoanalysis and coined the term unconscious; Said we dream to fulfill tasks

People (cont)	
Stanley Hall	Created APA and first psychological research lab at Johns Hopkins
Wilhelm Wundt	German professor who created a campaign promoting psychology to become its own field of study
William James	Founder of functionalism; said we have a stream of consciousness in which ideas flow

Genetics	
Chromosome	Strands of DNA that carry genetic information
Dominant gene	Gene expressed in a heterozygous condition
Genes	DNA segments that serve as key functional units in genetic transfer
Genetic Mapping	Determines location and sequence of specific genes
Genotype	One's genetic makeup
Fraternal Twins	Two eggs fertilized by different sperm cells
Heterozygous	One dominant and one recessive allele
Homozygous	Both alleles are either dominant or recessive
Identical Twins	Results from a zygote splitting
Natural Selection	Favorable genes will be passed through generations
Phenotype	Expression of one's genotype

Genetics (cont)

Polygenic Traits	Characteristic influenced by more than one gene
Recessive Gene	Gene not expressed in a heterozygous condition
Zygote	Single cell formed by union of sperm and egg

Body Scans/Tests

Electrical Stimulation	Sends weak electrical currents into brain structure to activate it
Electroen-cephal-ograph (EEG)	Monitors electrical activity in brain over time with electrodes attached to scalp
Electromy-ograph	Records muscular activity
Electrooc-ulograph	Records eye movement
Transc-ranial Magnetic Stimulation	Enhances or depresses parts of the brain

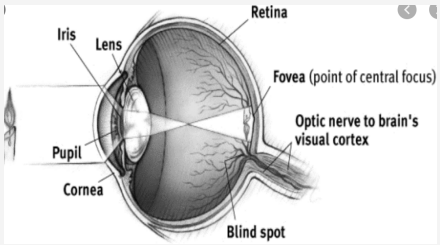
Parts of Brain

Brain Plasticity	Brain is more plastic than assumed
Broca's Area	Controls the production of speech
Cerebral Cortex	Folded outer layer of cerebrum
Cerebral Hemisp-heres	Left and right halves of cerebrum
Corpus Callosum	Connects both cerebral hemispheres
Forebrain	emotional and complex thought; Largest and most complex part of brain

Parts of Brain (cont)

Frontal Lobe	Largest human lobe; controls muscle movement
Hindbrain	vital functions; Includes cerebellum, medulla, and pons
Left Hemisphere	Verbal processing, language, speech, reading, writing, sequential
Midbrain	sensory functions; Part of brain stem between hindbrain and forebrain
Occipital Lobe	Location of visual processing
Parietal Lobe	Registers sense of touch, phantom limb
Right Hemisphere	Nonverbal processing, spatial, musical, visual recognition, parallel
Temporal Lobe	Controls auditory processing along with speech and language comprehension
Wernicke's Area	Controls the comprehension of a language

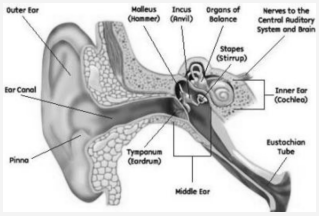
Eye Diagram



Ear Parts

Amplitude	Loudness
Basilar Membrane	Runs through center of cochlea and has auditory receptors
Cochlea	Coiled tunnel filled with fluid that has hearing receptors
External ear (pinna)	Collects sound
Ossicles	Hammer, anvil, stirrup (tinniest bones in body)
Purity	Timbre
Semici-rcular Canals	Passage inside ear that maintains equilibrium
Wavelength	Pitch

Ear Diagram



Types of psychologsts

Psycho-logist	Dedicated to investigating human behavior in a scientific way
Clinical Psycho-logist	Studies and deals with mentally ill patients
Psychi-atrist	Diagnoses and treats psychological disorders
Counseling Psycho-logist	Deals with people's every day problems of modern severity

Research Methods

Double-blind	Experimenters nor subjects know the hypothesis
Case Study	In-depth investigation on an individual or topic
Experiment	Manipulating a variable under controlled conditions and. observing changes in a second variable
Naturalistic Observ-ation	Conducted be observing others in their natural enviro-nment
Quasi-Exp-eriment	Individuals chosen for a study have an equal chance of being in the control or experi-mental group

APA Guidelines

Anonymity	Not collecting a person's name during a study
Confident-iality	Not releasing any specific response sources
Debriefing	Subjects are told the truth of an experiment after being lied to
Informed Consent	Allowing participants to choose whether or not they want to be in the study after being told about it
Random Assignment	Assigning individuals from the sample into the experi-mental or control group without bias
Random Sample	Sample of people chosen for an experiment without bias

APA Guidelines (cont)

Random Selection	Choosing members of a population with no bias that accurately represents that population

Ways to Represent Data

Correl-ation	Relationship between two variables
Correl-ation Coefficient	Degree of relationship between two variables (-1 to 1)
Frequency Distri-bution	Indicates how often an observation or number occurs
Histogram	A bar graph
Mean	The average of all numbers in a data set
Median	The number that lies in the middle of a data set when ordered from least to greatest
Mode	The number that appears most often in a set of data
Normal Curve	Bell-shaped curve where the average score lies in the middle
Range	Largest number- smallest number
Scatterplot	Graph of points showing relationship between the x and y axis
Standard Deviation	Average distance from the mean in a data set

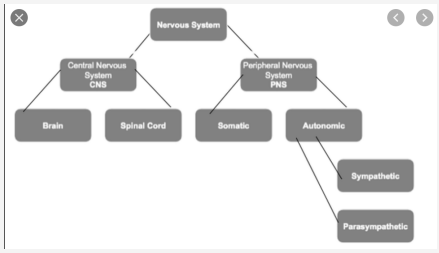
Ways to Represent Data (cont)

Statis-tical Signif-icance	Probability that data collected from an experiment are due to chance

Nervous System Subsystems

Autonomic Nervous System	Nerves connecting to heart, blood vessels, smooth muscles, and glandsd
Central Nervous System	Brain and spinal cord
Parasy-mpathetic Nervous System	Autonomic nervous system subset that conserves resources (rest and digest)
Peripheral Nervous System	Nerves that lie outside CNS
Somatic Nervous System	Nerves that connect voluntary skeletal muscles to sensory receptors
Sympat-hetic Nervous System	Autonomic nervous system subset that deals with emergency body resources (fight or flight)

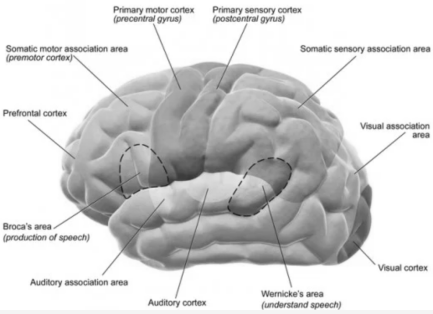
Nervous System Subsets Diagram



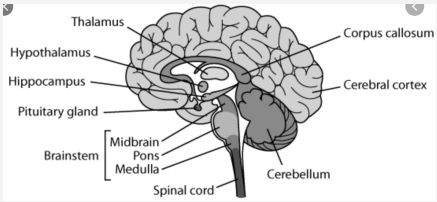
Glands

Adrenal	Salt and carbs metabolism
Gonads	Sex hormones
Pancreas	Sugar metabolism (insulin)
Pituitary	Master gland; secretes growth hormones
Thyroid	Metabolic rate

Brain Diagram



Brain Diagram



Eye Parts

Cones	Visual receptors that help in daylight and seeing colors
Blind Spot	Hole in retina where nerve fibers exit; image that falls on it isn't visible
Feature Detectors	Neurons that respond to very specific features of more complex stimuli
Fovea	Tiny spots in center of retina where visual acuity is at its greatest; only has cones

Eye Parts (cont)

Lens	Transparent eye structure that focuses light rays falling on retine
Optic Chiasm	Where optic nerves cross
Optic Disk	Hole in retina where optic nerves exit eye
Optic Nerve	Axons that connect eye to brain
Photor-eceptor	Rods and cones
Pupil	Opening in iris that allows light to pass to back of eyes
Retina	Neural tissue at back of eye that absorbs light, processes images, and sends visual information to brain
Rods	Visual receptors that help with night vision, peripheral vision, and black and white images

Stages of Sleep

1	Lightest stage; theta waves; 4-7 waves on screen; 1-7 minutes
2	Slow waves; all waves; spikes on screen; slower heart rate; 10-25 minutes
3&4	Deep and slow waves; delta waves; slow/long waves; longest NREM stage
REM	Waves similar to awake ones; beta waves; dreaming; rapid eye movement; fast breathing; no control

Approaches

Behavioral	Study of observable reactions
Biological	Behavior controlled by physiological aspects
Cognitive	The way that the world is viewed determines one's behavior
Cross-cul-tural	Focuses on filling the data gap between white males and minorities
Eclectic	Treatment approach varies on the client's problem
Evolut-ionary	Views behaviors as human adaption
Functi-onalism	Focuses on purpose of consciousness
Humanistic	Emphasizes human qualities and potential
Psycho-analytic	Addresses internal motiva-tions and unsconcious thoughts that affect one's behavior
Struct-ualism	Analyzes consciousness in elements and their relati-onship

Parts of an Experiment

Confou-nding Variable	Two independent variables in an experiment
Control Group	Group that does not receive special treatment
Dependent Variable	Variable affected when the independent variable is altered
Experi-mental Group	Group that receives special treatment
Extraneous Variable	Outside variable that influences the dependent variable

Parts of an Experiment (cont)

Hypothesis	Prediction of what the data will prove at the end of an experiment
Indepe-ndent Variable	Event or condition manipu-lated in order to evoke change in the dependent variable
Operat-ional Definition	Specific definition of the measures of the variables in an experiment
Subject/P-articipant	People or animals observed in a study

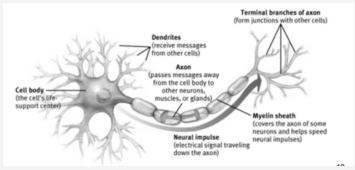
Neuron Parts

Action Potential	Shift in neuron's electrical charge that travels along axon
Afferent Nerve Fibers	Carry information **inwards** to CNS
Axon	Long fiber that transmits signals way from soma to other cells
Dendrites	Receives information
Efferent Nerve Fibers	Carry information **outwards** from CNS
Glia	Provide support for neurons
Mylein Sheath	Insulates axons to speed up signal transmissions
Resting Potential	Neuron is stable, negatively charged, and inactive
Reuptake	Neurotransmitters sponged from synaptic cleft by presyn-aptic membrane

Neuron Parts (cont)

Soma	Cell body which contains the nucleus and main cell parts
Synapse/ Synaptic Cleft	Gap between terminal button of a neuron and cell membrane of another
Terminal Buttons	Secretes chemicals

Neuron Image



Drugs

Alcohol	Beverages containing ethyl alcohol (ex. vodka, rum, beer, whiskey)
Cannabis	Plant that makes weed, THC, and hashish
MDMA	Related to amphetamines, hallucinogens, and mescaline (ex. adulterants, ecstasy, caffeine, heroine)
Narcotics	Opiates; relieve pain (Ex. opium, heroin, codeine, oxycodone)
Opiates	Narcotics; relieve pain (ex. same as narcotics)
Psycho-active Drugs	Modify mental, emotional, and behavioral functions
Sedatives	Sleep-inducting drugs that decrease CNS function and behaviors (ex. sleeping pills)

Drugs (cont)

Stimulants	Increase CNS activation and behaviors (Ex. Cocaine, meth, adderal)

Perception Phenomenons

Absolute Threshold	Minimum stimulus that can be detected
Additive Color Mixing	More light in a mix than exists in any one light
Afterimage	Visual image that persists after stimulus is removed
Binocular Depth Cues	Clues about distance based on differing views of two eyes
Conver-gence	Eyes go inward when looking at a close-up object
Dark Adaptation	Eyes become sensitive to light with little light present
Feature Analysis	Detecting specifics in a visual input and putting them in a more complex form
Habitu-ation	Tendency to have a decreased response to something
Impossible Figures	Objects that can be repres-ented in 2D but not 3D
Inatte-ntional Bias	Failure to see visible things because attention is focused
Just Noticeable Difference	Smallest difference in stimulus intensity that can be detected

Perception Phenomenons (cont)	
Light Adaptation	Eyes become less sensitive to light in high illumination
Monocular Depth Cues	Ability to judge distance with one eye
Motion Parallex	Closer things more quicker than further items
Parallel Processing	Processing many aspects of a problem simultaneously
Perceptual Constancy	Tendency to experience a stable perception when something is changing
Perceptual Set	Readiness to perceive a certain stimuli in a particular way
Phi Phenomenon	Moving illusion done by presenting visual stimuli in rapid order
Retina Disparity	Objects within 25ft look slightly different if one eye is covered
Reversible Figure	Drawing that can go back and forth with interpretations
Sensory Adaptation	Gradual decline in sensitivity because of prolonged stimulation
Subliminal Perception	Registration of sensory input without being aware
Subtractive Color Mixing	Removing wavelengths to make a color darker

Sleep Phenomenons/ Disorders	
Insomnia	Chronic problems getting adequate sleep
Latent Content	Hidden meaning of a dream
Lucid Dreams	People thinking clearly while in a dream and walking through life
Manifest Content	Plot of a dream, the literal plot
Night Terrors	Abrupt awakenings from NREM with panic
Nightmares	Anxiety-arousing dreams that lead to people waking up from REM
REM Sleep Behavior Disorder	Acting out while one is asleep
Sleep Apnea	Reflexive gasps for air that wake people up
Somnambulism	Sleepwalking