

## Chapter 1: Thinking Critically With Psychological Science

The Need for Psychological Science	Research Strategies: How Psychologists Ask and Answer Questions	Statistical Reasoning in Everyday Life
<ul style="list-style-type: none"> <li>• Did we Know it All Along? Hindsight Bias</li> <li>• Overconfidence</li> <li>• Perceiving Order in Random Events</li> <li>• The Scientific Attitude: Curious, Skeptical, and Humble</li> <li>• Critical Thinking</li> </ul>	<ul style="list-style-type: none"> <li>• The Scientific Method</li> <li>• Description                             <ul style="list-style-type: none"> <li>○ The Case study</li> <li>○ Naturalistic Observation</li> <li>○ The Survey</li> </ul> </li> <li>• Correlation                             <ul style="list-style-type: none"> <li>○ Regression Toward the Mean</li> <li>○ Correlation and Causation</li> </ul> </li> <li>• Experimentation                             <ul style="list-style-type: none"> <li>○ Independent and Dependent Variables</li> <li>○ Predicting Real Behavior</li> </ul> </li> <li>• Psychology's Research Ethics                             <ul style="list-style-type: none"> <li>○ Protecting Research Participants</li> <li>○ Values in Research</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Describing data                             <ul style="list-style-type: none"> <li>○ Measures of central tendencies</li> <li>○ Measures of variations</li> </ul> </li> <li>• Significant differences                             <ul style="list-style-type: none"> <li>○ When is an observed difference reliable?</li> <li>○ When is observed differences significant?</li> </ul> </li> </ul>
Learning Objectives		
<p><b>1-1 How does our everyday thinking sometimes lead us to a wrong conclusion</b></p> <p><b>1-2</b> How do the scientific attitudes's three main components relate to critical thinking?</p>	<p><b>1-3</b> How do theories advance psychological science?</p> <p><b>1-4 How do Psychologists use case studies, naturalistic observations, and surveys to observe and describe behavior, and why is random sampling important?</b></p> <p><b>1-5 What does it mean when we say two things are correlated, and what are positive and negative correlations?</b></p> <p><b>1-6</b> What is regression toward the mean?</p> <p><b>1-7 Why do correlations enable predictions, but not cause-effect explanation?</b></p> <p><b>1-8 What are the characteristics of experimentation that make it possible to isolate cause and effect?</b></p> <p><b>1-9</b> Can laboratory experiments illuminate everyday life?</p> <p><b>1-10</b> Why do psychologists study animals and what ethical guidelines safeguard human and animal research participants? How do human values influence psychology?</p>	<p><b>1-11</b> How do we describe data using three measures of central tendency, and what is the relative usefulness of the two measures of variation</p> <p><b>1-12</b> How do we know whether an observed difference can be generalized to other populations?</p>
4 (3+1)	14 (1+3+3+1+1+3+1+1)	2

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**Bold = prepare for the final**

## Chapter 2: The Biology of the Mind

Neural and Hormonal Systems	Tools of Discovery and Older Brain Structures	The Cerebral Cortex and Our Divided Brain
<ul style="list-style-type: none"> <li>• Biology, Behavior and Mind</li> <li>• Neural communication                             <ul style="list-style-type: none"> <li>○ Neurons</li> <li>○ The Neural Impulse</li> <li>○ How Neurons Communicate</li> <li>○ How Neurotransmitters Influence Us                                     <ul style="list-style-type: none"> <li>▪ How Drugs and Other Chemicals Alter Neurotransmission</li> </ul> </li> </ul> </li> <li>• The Nervous System                             <ul style="list-style-type: none"> <li>○ The Peripheral Nervous System</li> <li>○ The Central Nervous System</li> </ul> </li> <li>• The Endocrine System</li> </ul>	<ul style="list-style-type: none"> <li>• The Tools of Discovery: Having Our Head Examined</li> <li>• Older Brain Structures                             <ul style="list-style-type: none"> <li>○ The Brainstem                                     <ul style="list-style-type: none"> <li>▪ The thalamus</li> <li>▪ The reticular formation</li> <li>▪ The cerebellum</li> <li>▪ The limbic system</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The Cerebral Cortex                             <ul style="list-style-type: none"> <li>○ Structure of the Cortex</li> <li>○ Functions of the Cortex                                     <ul style="list-style-type: none"> <li>▪ Motor functions</li> <li>▪ Sensory functions</li> <li>▪ Association areas</li> </ul> </li> <li>○ The Brain's Plasticity</li> </ul> </li> <li>• Our Divided Brain                             <ul style="list-style-type: none"> <li>○ Splitting the Brain</li> <li>○ Right-Left Differences in the Intact Brain</li> </ul> </li> </ul>
Learning Objectives		
<p><b>2-1</b> Why are psychologists concerned with human biology?</p> <p><b>2-2</b> What are neurons, and how do they transmit information?</p> <p><b>2-3</b> How do nerve cells communicate with other nerve cells?</p> <p><b>2-4</b> How do neurotransmitters influence behavior, and how do drugs and other chemicals affect neurotransmission?</p> <p><b>2-5</b> What are the functions of the nervous system's main divisions, and what are the three main types of neurons?</p> <p><b>2-6</b> How does the endocrine system transmit information and interact with the nervous system?</p>	<p><b>2-7</b> How do neuroscientists study the brain's connections to behavior and mind?</p> <p><b>2-8</b> What structures make up the brainstem, and what are the functions of the brainstem, thalamus, reticular formation, and cerebellum</p> <p><b>2-9</b> What are the limbic system's structures and functions?</p>	<p><b>2-10</b> What are the functions of the various cerebral cortex regions?</p> <p><b>2-11</b> To what extent can a damaged brain reorganize itself, and what is neurogenesis?</p> <p><b>2-12</b> What do split brains reveal about the functions of our two brain hemispheres?</p> <p><b>2-13</b> What does research tell us about being left-handed? Is it advantageous to be right-handed?</p>
9 (5 from #4 and #5)	5	6

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## Chapter 3: Consciousness and the Two-Track Mind

Brain States and Consciousness	Sleep and Dreams	Drugs and Consciousness
<ul style="list-style-type: none"> <li>• Defining Consciousness</li> <li>• The Biology of Consciousness                             <ul style="list-style-type: none"> <li>○ Cognitive Neuroscience</li> <li>○ Dual Processing: The Two-Track Mind</li> </ul> </li> <li>• Selective Attention                             <ul style="list-style-type: none"> <li>○ Selective Attention and Accidents</li> <li>○ Selective Inattention</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Biological Rhythms and Sleep                             <ul style="list-style-type: none"> <li>○ Circadian Rhythm</li> <li>○ Sleep Stages</li> <li>○ REM sleep</li> <li>○ What affects Our Sleep Patterns</li> </ul> </li> <li>• Why do we Sleep?</li> <li>• Sleep Deprivation and Sleep Disorders                             <ul style="list-style-type: none"> <li>○ Effects of Sleep Loss</li> <li>○ Major Sleep Disorders</li> </ul> </li> <li>• Dreams                             <ul style="list-style-type: none"> <li>○ What We Dream</li> <li>○ Why We Dream</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Tolerance and Addiction</li> <li>• Types of Psychoactive Drugs                             <ul style="list-style-type: none"> <li>○ Depressants                                     <ul style="list-style-type: none"> <li>▪ Alcohol</li> <li>▪ Barbiturates</li> <li>▪ Opiates</li> </ul> </li> <li>○ Stimulants                                     <ul style="list-style-type: none"> <li>▪ Nicotine</li> <li>▪ Cocaine</li> <li>▪ Methamphetamines</li> <li>▪ Ecstasy</li> </ul> </li> <li>○ Hallucinogens</li> </ul> </li> <li>• Influences on Drug Use                             <ul style="list-style-type: none"> <li>○ Biological Influences</li> <li>○ Psychological and Social-Cultural Influences</li> </ul> </li> </ul>
Learning Objectives		
<p><b>3-1</b> What is the place of consciousness in psychology's history?</p> <p><b>3-2</b> What is the "dual processing" being revealed by today's cognitive neuroscience?</p> <p><b>3-3</b> How does selective attention direct our perceptions?</p>	<p><b>3-4</b> What is sleep?</p> <p><b>3-5</b> How do our biological rhythms influence our daily life?</p> <p><b>3-6</b> What is the biological rhythm of our sleeping and dreaming stages?</p> <p><b>3-7</b> How do biology and environment interact in our sleep patterns?</p> <p><b>3-8</b> What are sleep's functions?</p> <p><b>3-9</b> How does sleep loss affect us, and what are the major sleep disorders?</p> <p><b>3-10</b> What do we dream?</p> <p><b>3-11</b> What functions have theorists proposed for dreams?</p>	<p><b>3-12</b> What are substance use disorders, and what role do tolerance, withdrawal, and addiction play in these disorders?</p> <p><b>3-13</b> How has the concept of addiction changed?</p> <p><b>3-14</b> What are depressants, and what are their effects?</p> <p><b>3-15</b> What are stimulants, and what are their effects?</p> <p><b>3-16</b> What are hallucinogens, and what are their effects?</p> <p><b>3-17</b> Why do some people become regular users of consciousness-altering drugs?</p>
1	10	9

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## Chapter 4: Nature, Nurture, and Human Diversity

Behavior Genetics: Predicting Individual Differences	Evolutionary Psychology: Understanding Human Nature	Culture, Gender and Other Environmental Influences
<ul style="list-style-type: none"> <li>• Genes: Our Codes for Life</li> <li>• Twin and Adoption Studies                             <ul style="list-style-type: none"> <li>○ Identical versus Fraternal Twins</li> <li>○ Separated Twins</li> <li>○ Biological versus Adoptive Relatives</li> </ul> </li> <li>• Temperament and Heredity</li> <li>• Heritability</li> <li>• Gene-Environment Interaction                             <ul style="list-style-type: none"> <li>○ The new Frontier: Molecular Behavior Genetics                                     <ul style="list-style-type: none"> <li>▪ Searching for Specific Genes influencing behavior</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Natural Selection and Adaptation</li> <li>• Evolutionary Success Helps Explain Similarities                             <ul style="list-style-type: none"> <li>○ Our Genetic Legacy</li> <li>○ Evolutionary Psychology Today</li> </ul> </li> <li>• An Evolutionary Explanation for Human Sexuality                             <ul style="list-style-type: none"> <li>○ Male-Female Differences in Sexuality</li> <li>○ Natural Selection and Mating Preferences</li> <li>○ Critiquing the Evolutionary Perspective</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• How Does Experiences Influence Development?                             <ul style="list-style-type: none"> <li>○ Experience and Brain Development</li> <li>○ How much credit or Blame Do Parents Deserve?</li> <li>○ Peer Influence</li> </ul> </li> <li>• Cultural Influences                             <ul style="list-style-type: none"> <li>○ Variations across cultures</li> <li>○ Variations over time</li> <li>○ Culture and the Self</li> <li>○ Culture and Child Raising</li> <li>○ Developmental Similarities Across Groups</li> </ul> </li> <li>• Gender Development                             <ul style="list-style-type: none"> <li>○ Similarities and Differences                                     <ul style="list-style-type: none"> <li>▪ Aggression</li> <li>▪ Social power</li> <li>▪ Social connectedness</li> </ul> </li> <li>○ The nature of Gender: Our Biological Sex                                     <ul style="list-style-type: none"> <li>▪ Prenatal sexual development</li> <li>▪ Adolescent sexual development</li> <li>▪ Sexual development variations</li> </ul> </li> <li>○ The Nurture of Gender: Our Culture and Experiences                                     <ul style="list-style-type: none"> <li>▪ Gender roles</li> <li>▪ How do we learn gender</li> </ul> </li> <li>○ Reflections on nature, nurture and their interaction</li> </ul> </li> </ul>
Learning Objectives		
<p><b>4-1</b> What are chromosomes, DNA, genes, and the human genome? How do behavior geneticists explain our individual differences</p> <p><b>4-2</b> How do twin and adoption studies help us understand the effects and interactions of nature and nurture?</p> <p><b>4-3</b> What have psychologists learned about temperament?</p> <p><b>4-4</b> What is heritability, and how does it relate to individuals and groups?</p> <p><b>4-5</b> How is molecular genetics research changing our understanding of the effects of nature and nurture?</p> <p><b>4-6</b> What are some of the benefits and risks of prenatal genetic testing?</p>	<p><b>4-7</b> How do evolutionary psychologists use natural selection to explain behavior tendencies?</p> <p><b>4-8</b> How might an evolutionary psychologist explain male-female differences in sexuality and mating preferences?</p> <p><b>4-9</b> What are the key criticisms of evolutionary explanations of human sexuality, and how do evolutionary psychologists respond?</p>	<p><b>4-10</b> How do early experiences modify the brain?</p> <p><b>4-11</b> In what ways do parents and peers shape children's development?</p> <p><b>4-12</b> How does culture affect our behavior?</p> <p><b>4-13</b> How do individualist and collectivist cultures differ in their values and goals?</p> <p><b>4-14</b> How does the meaning of gender differ from the meaning of sex?</p> <p><b>4-15</b> What are some way in which males and females tend to be alike and to differ?</p> <p><b>4-16</b> How do sex hormones influence prenatal and adolescent sexual development, and what is a disorder of sexual development?</p> <p><b>4-17</b> How do gender roles and gender identity differ?</p> <p><b>4-18</b> What is included in the biopsychosocial approach to development?</p>
4	4	12

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## Chapter 5: Developing Through the Lifespan

Developmental issues, prenatal development and the Newborn	Infancy and Childhood	Adolescence	Adulthood
<ul style="list-style-type: none"> <li>• Developmental Psychology's Major Issues                             <ul style="list-style-type: none"> <li>○ Continuity and Stages</li> <li>○ Stability and Change</li> </ul> </li> <li>• Prenatal Development and the Newborn                             <ul style="list-style-type: none"> <li>○ Conception</li> <li>○ Prenatal Development</li> <li>○ The competent Newborn</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Physical Development                             <ul style="list-style-type: none"> <li>○ Brain Development</li> <li>○ Motor Development</li> <li>○ Brain maturation and Infant memory</li> </ul> </li> <li>• Cognitive Development                             <ul style="list-style-type: none"> <li>○ Piaget's Theory and Current Thinking                                     <ul style="list-style-type: none"> <li>▪ Sensorimotor stage</li> <li>▪ Preoperational Stage</li> <li>▪ Concrete operational stage</li> <li>▪ Formal operational stage</li> </ul> </li> <li>○ An Alternative Viewpoint: Lev Vygotsky and the Social Child</li> <li>○ Reflecting on Piaget's Theory                                     <ul style="list-style-type: none"> <li>▪ Implications for Parents and Teachers</li> </ul> </li> <li>○ Autism Spectrum Disorder</li> </ul> </li> <li>• Social Development                             <ul style="list-style-type: none"> <li>○ Human Bonding                                     <ul style="list-style-type: none"> <li>▪ Body Contact</li> <li>▪ Familiarity</li> </ul> </li> <li>○ Attachment Differences                                     <ul style="list-style-type: none"> <li>▪ Attachment Styles and Later Relationships</li> </ul> </li> <li>○ Deprivation of Attachment</li> <li>○ Self-Concept</li> <li>○ Parenting Styles</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Physical Development</li> <li>• Cognitive Development                             <ul style="list-style-type: none"> <li>○ Development of Reasoning Power</li> <li>○ Developing Morality                                     <ul style="list-style-type: none"> <li>▪ Moral Reasoning</li> <li>▪ Moral Intuition</li> <li>▪ Moral Actions</li> </ul> </li> </ul> </li> <li>• Social Development                             <ul style="list-style-type: none"> <li>○ Forming and Identity</li> <li>○ Parent and Peer Relationships</li> </ul> </li> <li>• Emerging Adulthood</li> </ul>	<ul style="list-style-type: none"> <li>• Physical Development                             <ul style="list-style-type: none"> <li>○ Physical Changes in Middle Adulthood</li> <li>○ Physical Changes in Late Adulthood                                     <ul style="list-style-type: none"> <li>▪ Life Expectancy</li> <li>▪ Sensory Abilities, Strength, and Stamina</li> <li>▪ Health</li> <li>▪ The Aging Brain</li> </ul> </li> </ul> </li> <li>• Cognitive Development                             <ul style="list-style-type: none"> <li>○ Aging and Memory</li> <li>○ Neurocognitive Disorders and Alzheimer's Disease</li> </ul> </li> <li>• Social Development                             <ul style="list-style-type: none"> <li>○ Adulthood's Ages and Stages</li> <li>○ Adulthood's Commitments                                     <ul style="list-style-type: none"> <li>▪ Love</li> <li>▪ Work</li> </ul> </li> <li>○ Well-Being Across the Lifespan</li> <li>○ Death and Dying</li> </ul> </li> </ul>

### Learning Objectives

<p>5-1 What are three issues that have engaged developmental psychologists?</p> <p><b>5-2 What is the course of prenatal development, and how do teratogens affect that development?</b></p> <p>5-3 What are some newborn abilities, and how do researchers explore infants' mental abilities?</p>	<p>5-4 During infancy and childhood, how do the brain and motor skills develop?</p> <p>5-5 From the perspectives of Piaget, Vygotsky, and today's researchers, how does a child's mind develop? (3)</p> <p>5-6 What is autism spectrum disorder?</p> <p><b>5-7 How do parent-infant attachment bonds form?</b></p> <p>5-8 How have psychologists studied attachment differences, and what have they learned?</p> <p><b>5-9 How does childhood neglect or abuse affect children's attachments?</b></p> <p>5-10 How do children's self-concepts develop?</p> <p><b>5-11 What are the three parenting styles, and how do children's traits relate to them?</b></p>	<p>5-12 How is adolescence defined, and how do physical changes affect developing teens?</p> <p><b>5-13 How did Piaget, Kohlberg, and later researchers describe adolescent cognitive and moral development?</b></p> <p>5-14 What are the social tasks and challenges of adolescence?</p> <p>5-15 How do parents and peers influence adolescents?</p> <p>5-16 What is emerging adulthood?</p>	<p>5-17 What physical changes occur during middle and late adulthood?</p> <p>5-18 How does memory change with age?</p> <p>5-19 How do neurocognitive disorders, and Alzheimer's disease affect cognitive ability?</p> <p>5-20 What themes and influences mark our social journal from early adulthood to death?</p> <p>5-21 How does our well-being change across the lifespan?</p> <p>5-22 A loved one's death triggers what range of relations?</p>
1	10	4	5

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## Chapter 6: Sensation and Perception

Basic Concepts of Sensation and Perception	Vision: Sensory and Perceptual Processing	The Nonvisual Senses
<ul style="list-style-type: none"> <li>• Transduction</li> <li>• Thresholds                             <ul style="list-style-type: none"> <li>○ Absolute Thresholds</li> <li>○ Difference Thresholds</li> </ul> </li> <li>• Sensory Adaptation</li> <li>• Perceptual Set</li> <li>• Context Effects</li> <li>• Motivation and Emotion</li> </ul>	<ul style="list-style-type: none"> <li>• Light Energy and Eye Structures                             <ul style="list-style-type: none"> <li>○ The Stimulus Input: Light Energy</li> <li>○ The Eye</li> </ul> </li> <li>• Information Processing in the Eye and Brain                             <ul style="list-style-type: none"> <li>○ Retinal Processing</li> <li>○ Color Processing</li> <li>○ Feature Detection</li> <li>○ Parallel Processing</li> </ul> </li> <li>• Perceptual Organization                             <ul style="list-style-type: none"> <li>○ Form Perception                                     <ul style="list-style-type: none"> <li>▪ Figure and Ground</li> <li>▪ Grouping</li> </ul> </li> <li>○ Depth Perception                                     <ul style="list-style-type: none"> <li>▪ Binocular Cues</li> <li>▪ Monocular Cues</li> </ul> </li> <li>○ Motion Perception</li> <li>○ Perceptual Constancies                                     <ul style="list-style-type: none"> <li>▪ Color and Brightness Constancies</li> <li>▪ Shape and Size Constancies</li> </ul> </li> </ul> </li> <li>• Perceptual Interpretation                             <ul style="list-style-type: none"> <li>○ Experience and Visual Perception                                     <ul style="list-style-type: none"> <li>▪ Restored Vision and Sensory Restriction</li> <li>▪ Perceptual Adaptation</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Hearing                             <ul style="list-style-type: none"> <li>○ The Stimulus Input: Sound Waves</li> <li>○ The Ear</li> <li>○ Perceiving Loudness, Pitch, and Location                                     <ul style="list-style-type: none"> <li>▪ Responding to Loud and Soft Sounds</li> <li>▪ Hearing Different Pitches</li> <li>▪ Locating Sounds</li> </ul> </li> </ul> </li> <li>• The Other Senses                             <ul style="list-style-type: none"> <li>○ Touch</li> <li>○ Pain                                     <ul style="list-style-type: none"> <li>▪ Understanding Pain</li> <li>▪ Controlling Pain</li> </ul> </li> <li>○ Taste</li> <li>○ Smell</li> <li>○ Body Position and Movement</li> </ul> </li> <li>• Sensory Interaction</li> </ul>
Learning Objectives		
<p>6-1 What are sensation and perception? What do we mean by bottom-up processing and top-down processing?</p> <p>6-2 What three steps are basic to all our sensory systems?</p> <p>6-3 How do absolute thresholds and difference thresholds differ, and what effect, if any, do stimuli below the absolute threshold have on us?</p> <p>6-4 Does subliminal sensation enable subliminal persuasion?</p> <p>6-5 What is the function of sensory adaptation?</p> <p>6-6 How do our expectations, contexts, motivations, and emotions influence our perceptions?</p>	<p>6-7 What are the characteristics of the energy that we see as visible light? What structures in the eye help focus that energy?</p> <p>6-8 <b>How do the rods and cones process information, and what is the path information travels from the eye to the brain?</b></p> <p>6-9 <b>How do we perceive color in the world around us?</b></p> <p>6-10 Where are the feature detectors located, and what do they do?</p> <p>6-11 How does the brain use parallel processing to construct visual perceptions?</p> <p>6-12 <b>How did the Gestalt psychologists understand perceptual organization, and how do figure-ground and grouping principles contribute to our perceptions?</b></p> <p>6-13 How do we use binocular and monocular cues to perceive the world in three dimensions, and how we perceive motion?</p> <p>6-14 How do Perceptual constancies help us construct meaningful perceptions?</p> <p>6-15 What does research on restored vision, sensory, restriction, and perceptual adaptation reveal about the effects of experience on perception?</p>	<p>6-16 What are the characteristics of air pressure waves that we hear as sound?</p> <p>6-17 How does the ear transform sound energy into neural messages?</p> <p>6-18 How do we detect loudness, discriminate pitch, and locate sounds?</p> <p>6-19 How do we sense touch?</p> <p>6-20 <b>What biological, psychological, and social-cultural influences affect our experience of pain? How do placebos, distraction, and hypnosis help control pain?</b></p> <p>6-21 In what ways are our sense of taste and smell similar, and how do they differ?</p> <p>6-22 How do we sense our body's position and movement?</p> <p>6-23 How does sensory interaction influence our perceptions and what is embodied cognition?</p> <p>6-24 <b>What are the claims of ESP and what have most research psychologists concluded after putting these claims to the test?</b></p>
3	9	8

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Chapter 7: Learning		
Basic Learning Concept and Classical Conditioning	Operant Conditioning	Biology, Cognition and Learning
<ul style="list-style-type: none"> <li>• How do we Learn?</li> <li>• Classical Conditioning               <ul style="list-style-type: none"> <li>○ Pavlov's Experiments                   <ul style="list-style-type: none"> <li>▪ Acquisition</li> <li>▪ Extinction and Spontaneous Recovery</li> <li>▪ Generalization</li> <li>▪ Discrimination</li> </ul> </li> <li>○ Pavlov's Legacy                   <ul style="list-style-type: none"> <li>▪ Applications of Classical Conditioning</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Skinner's Experiments               <ul style="list-style-type: none"> <li>○ Shaping Behavior</li> <li>○ Types of Reinforcers                   <ul style="list-style-type: none"> <li>▪ Primary and Conditioned Reinforcers</li> <li>▪ Immediate and Delayed Reinforcers</li> </ul> </li> <li>○ Reinforcement Schedules</li> <li>○ Punishment</li> </ul> </li> <li>• Skinner's Legacy               <ul style="list-style-type: none"> <li>○ Applications of Operant Conditioning                   <ul style="list-style-type: none"> <li>▪ At School</li> <li>▪ In Sports</li> <li>▪ At work</li> <li>▪ At Home</li> </ul> </li> </ul> </li> <li>• Contrasting Classical and Operant Conditioning</li> </ul>	<ul style="list-style-type: none"> <li>• Biological Constraints on Conditioning               <ul style="list-style-type: none"> <li>○ Limits on Classical Conditioning</li> <li>○ Limits on Operant Conditioning</li> </ul> </li> <li>• Cognition's Influence on Conditioning               <ul style="list-style-type: none"> <li>○ Cognitive processes and Classical Conditioning</li> <li>○ Cognitive Processes and Operant Conditioning</li> </ul> </li> <li>• Learning by Observation               <ul style="list-style-type: none"> <li>○ Mirrors and Imitation in the Brain</li> <li>○ Applications of Observational Learning                   <ul style="list-style-type: none"> <li>▪ Prosocial effects</li> <li>▪ Antisocial Effects</li> </ul> </li> </ul> </li> </ul>
Learning Objectives		
<p>7-1 Define learning, and identify some basic forms of learning.</p> <p>7-2 Describe behaviorism's view of learning.</p> <p><b>7-3 Describe who Pavlov was, and identify the basic components of classical conditioning (3 questions).</b></p> <p>7-4 Summarize the processes of acquisition, extinction, spontaneous recovery, generalization, and discrimination.</p> <p>7-5 Explain why Pavlov's work remains so important.</p> <p>7-6 Identify some applications of Pavlov's work to human health and well-being, and describe how Watson applied these principles to learned fears.</p>	<p>7-7 Define operant conditioning.</p> <p>7-8 Describe who Skinner was, and explain how operant behavior is reinforced and shaped.</p> <p><b>7-9 Discuss the differences between positive and negative reinforcement, and identify the basic types of reinforcers (3 questions).</b></p> <p>7-10 Explain how the different reinforcement schedules affect behavior.</p> <p><b>7-11 Discuss how punishment and negative reinforcement differ, and explain how punishment affects behavior (3 questions).</b></p> <p>7-12 Discuss why Skinner's ideas provoked controversy, and identify how operant conditioning principles might be applied at school, in sports, at work, and at home.</p> <p>7-13 Describe how operant conditioning differs from classical conditioning.</p>	<p><b>7-14 Explain how biological constraints affect classical and operant conditioning.</b></p> <p>7-15 Explain how cognitive processes affect classical and operant conditioning.</p> <p>7-16 Discuss how observational learning differs from associative learning, and explain how observational learning may be enabled by mirror neurons.</p> <p><b>7-17 Discuss the impact of prosocial modeling and of antisocial modeling.</b></p>
5	10	5

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Chapter 8: Memory		
Studying and Encoding Memories	Storing and Retrieving Memories	Forgetting, Memory construction, and Improving Memory
<ul style="list-style-type: none"> <li>• Studying Memory               <ul style="list-style-type: none"> <li>○ Measuring Retention</li> <li>○ Memory Models                   <ul style="list-style-type: none"> <li>▪ Working Memory</li> </ul> </li> </ul> </li> <li>• Encoding Memories               <ul style="list-style-type: none"> <li>○ Dual-Track Memory: Effortful versus Automatic Processing</li> <li>○ Automatic Processing and Implicit Memories</li> <li>○ Effortful Processing and Explicit Memories                   <ul style="list-style-type: none"> <li>▪ Sensory Memory</li> <li>▪ Capacity of Short-Term and Working Memory</li> <li>▪ Effortful Processing Strategies</li> <li>▪ Distributed Practice</li> <li>▪ Levels of Processing</li> <li>▪ Making Material Personally Meaningful</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Memory Storage               <ul style="list-style-type: none"> <li>○ Retaining Information in the Brain                   <ul style="list-style-type: none"> <li>▪ Explicit Memory System: The Frontal Lobes and Hippocampus</li> <li>▪ Implicit Memory System: The Cerebellum and Basal Ganglia</li> <li>▪ The Amygdala, Emotions, and Memory</li> </ul> </li> <li>○ Synaptic Changes</li> </ul> </li> <li>• Memory Retrieval               <ul style="list-style-type: none"> <li>○ Retrieval Cues                   <ul style="list-style-type: none"> <li>▪ Priming</li> <li>▪ Context-dependent Memory</li> <li>▪ State Dependent memory</li> <li>▪ Serial Position Effect</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Forgetting               <ul style="list-style-type: none"> <li>○ Forgetting and the Two-Track Mind</li> <li>○ Encoding Failure</li> <li>○ Storage Decay</li> <li>○ Retrieval Failure</li> <li>○ Motivated Forgetting</li> </ul> </li> <li>• Memory Construction Errors               <ul style="list-style-type: none"> <li>○ Misinformation and Imagination Effects</li> <li>○ Source Amnesia</li> <li>○ Discerning True and False Memories</li> <li>○ Children’s Eyewitness Recall</li> </ul> </li> <li>• Improving Memory</li> </ul>
Learning Objectives		
<p>8-1 Define memory, and explain how it is measured.</p> <p><b>8-2 Explain how psychologists describe the human memory system.</b></p> <p>8-3 Distinguish between explicit and implicit memories.</p> <p>8-4 Identify the information we process automatically.</p> <p>8-5 Explain how sensory memory works.</p> <p>8-6 Describe the capacity of our short-term and working memory.</p> <p><b>8-7 Describe the effortful processing strategies that can help us remember new information.</b></p> <p><b>8-8 Describe the levels of processing and their effect on encoding.</b></p>	<p>8-9 Describe the capacity of long-term memory, and discuss whether our long-term memories are processed and stored in specific locations.</p> <p>8-10 Describe the roles of the frontal lobes and hippocampus in memory processing.</p> <p>8-11 Describe the roles played by the cerebellum and basal ganglia in memory processing.</p> <p>8-12 Discuss how emotions affect our memory processing.</p> <p>8-13 Explain how changes at the synapse level affect our memory processing.</p> <p>8-14 Describe how external cues, internal emotions, and order of appearance influence memory retrieval.</p>	<p><b>8-15 Explain why we forget.</b></p> <p><b>8-16 Explain how misinformation, imagination, and source amnesia influence our memory construction, and describe how we decide whether a memory is real or false.</b></p> <p>8-17 Discuss the reliability of young children’s eyewitness descriptions.</p> <p>8-18 Explain why reports of repressed and recovered memories are so hotly debated.</p> <p>8-19 Describe how you can use memory research findings to do better in this and other courses.</p>
8	4	8

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## Chapter 9: Thinking and Language

Thinking	Language and Thought
<ul style="list-style-type: none"> <li>• Concepts</li> <li>• Problem Solving: Strategies and Obstacles</li> <li>• Forming Good and Bad Decisions and Judgments                             <ul style="list-style-type: none"> <li>○ The Availability Heuristic</li> <li>○ Overconfidence</li> <li>○ Belief Perseverance</li> <li>○ The Effects of Framing</li> <li>○ The Perils and Powers of Intuition</li> </ul> </li> <li>• Thinking Creatively</li> <li>• Do Other Species Share Our Cognitive Skills                             <ul style="list-style-type: none"> <li>○ Using Concepts and Numbers</li> <li>○ Displaying Insight</li> <li>○ Using Tools and Transmitting Culture</li> <li>○ Other Cognitive Skills</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Language Structure</li> <li>• Language Development                             <ul style="list-style-type: none"> <li>○ When Do We Learn Language?                                     <ul style="list-style-type: none"> <li>▪ Receptive Language</li> <li>▪ Productive Language</li> </ul> </li> <li>○ Explaining Language Development                                     <ul style="list-style-type: none"> <li>▪ Statistical Learning</li> <li>▪ Critical Periods</li> </ul> </li> <li>○ Deafness and Language Development                                     <ul style="list-style-type: none"> <li>▪ Living in a Silent World</li> </ul> </li> </ul> </li> <li>• The Brain and Language</li> <li>• Do Other Species Have Language?</li> <li>• Thinking and Language                             <ul style="list-style-type: none"> <li>○ Language Influences Thinking</li> <li>○ Thinking in Images</li> </ul> </li> </ul>
Learning Objectives	
<p><b>9-1</b> Define cognition, and describe the functions of concepts.</p> <p><b>9-2</b> Describe the cognitive strategies that assist our problem solving, and identify the obstacles that hinder it. (4 questions)</p> <p><b>9-3</b> Define intuition, and describe how the availability heuristic, overconfidence, belief perseverance, and framing influence our decisions and judgments. (5 questions)</p> <p><b>9-4</b> Identify the factors that contribute to our fear of unlikely events.</p> <p><i>9-5 Describe how smart thinkers use intuition.</i></p> <p><b>9-6</b> Define creativity, and explain what fosters it.</p> <p><i>9-7 Describe what we know about thinking in other animals.</i></p>	<p><b>9-8</b> Describe the structural components of a language.</p> <p><b>9-9</b> Identify the milestones in language development, and describe how we acquire language.</p> <p><b>9-10</b> Identify the brain areas involved in language processing and speech.</p> <p><b>9-11</b> Describe what we know about other animals' capacity for language.</p> <p><b>9-12</b> Describe the relationship between language and thinking, and discuss the value of thinking in images.</p>
13	7

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