**Unit 1: Scientific Foundations of Psychology**

Psychology is the scientific study of behavior and mental processes. This course examines the history of psychology and psychological theories, contemporary perspectives on psychology, and how psychological research is conducted. As scientists, psychologists collect data and make observations about the ways in which humans and animals behave and think in order to understand behavior and mental processes. Psychologists use a variety of research methods and designs to conduct their research. These tools help them develop psychological theories about behavior and mental processes. To ensure that their results are valid and reliable, psychologists’ research must adhere to strict ethical and procedural guidelines. Historical research is the foundation of the field of psychology and has become the basis for the many subfields within psychology that exist today.

**Directions:** To be successful on the AP Exam, you need to be able to answer each learning target. This should be your checklist as you go through each of the 9 units. As you read and learn in this unit, make sure you can explain the following information.

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| **Essential Questions:** |
| * How does the methodology of the research affect the outcome of a study?
* How do ethical guidelines impact psychological research?
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| **Unit Outline and Learning Targets** |
| **1.1: Introducing Psychology-** *Skill: Apply theories and perspectives in authentic contexts*1. Recognize how philosophical and physiological perspectives shaped the development of psychological thought.
2. Identify the research contributions of major historical figures in psychology.
	* Mary Wilkins Calkins, Charles Darwin, Dorothea Dix, Sigmund Freud, G. Stanley Hall, William James, Ivan Pavlov, Jean Piaget, Carl Rogers, B. F. Skinner, Margaret Floyd Washburn, John Watson, Wilhelm Wundt
3. Describe and compare different theoretical approaches in explaining behavior.
	* Structuralism, Functionalism, Early Behaviorism, Gestalt, Psychoanalytic/Psychodynamic, Humanism, Evolutionary, Biological, Cognitive, Biopsychosocial, Sociocultural
4. Recognize the strengths and limitations of applying theories to explain behavior.
5. Distinguish the different domains of psychology.
	* Biological, Clinical, Cognitive, Counseling, Developmental, Educational, Experimental, Industrial-Organizational, Personality, Psychometric, Social, Positive

**1.2: Research Methods in Psychology-** *Skill: Analyze psychological research studies*1. Differentiate types of research with regard to purpose, strengths, and weaknesses.
	* Descriptive (survey research, naturalistic observations, case studies) correlational, experimental, and studies involving development (longitudinal studies, cross-sectional studies.)
2. Discuss the value of reliance on operational definitions and measurement in behavioral research.

**1.3 The Experimental Method-** *Skill: Analyze psychological research studies*1. Identify independent, dependent, confounding, and control variables in experimental designs.
2. Describe how research design drives the reasonable conclusions that can be drawn.
	* Experiments determine cause and effect, experimental controls reduce alternate explanations, random assignment is needed to demonstrate cause and effect, correlation can indicate relationship but not causation.
3. Distinguish between random assignment of participants to conditions in experiments and random selection of participants, primarily in correlational studies and surveys.

**1.4 Selecting a Research Method-** *Skill: Analyze psychological research studies*1. Predict the validity of behavioral explanations based on the quality of research design.
	* Confounding variables limit confidence in research conclusions.

**1.5 Statistical Analysis in Psychology-** *Skill: Analyze and interpret quantitative data.*1. Apply basic descriptive statistical concepts, including interpreting and constructing graphs and calculating simple descriptive statistics.
	* Measures of central tendency, variation(range, standard deviation), correlation coefficient, frequency distribution (normal, bimodal, positive skew, negative skew.)
2. Distinguish the purposes of descriptive statistics and inferential statistics.

**1.6 Ethical Guidelines in Psychology-** *Skill: Define and/or apply concepts.*1. Identify how ethical issues inform and constrain research practices.
2. Describe how ethical and legal guidelines protect research participants and promote sound ethical practice.
	* APA, Federal regulations, Local IRB, Institutional Animal Care and Use Committee
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| **Vocabulary to Master:** (you should be able to define each of these terms by test day)  |
| **1.1: Introducing Psychology**PsychologyPhilosophyPhysiologyNature-NurtureNatural SelectionEarly Approaches:StructuralismFunctionalismBehaviorismPsychoanalytic/psychodynamicGestaltModern Approaches:BiologicalBehavioralEvolutionaryCognitivePsychodynamicHumanisticSocioculturalBiopsychosocialDomains:Biological PsychologyClinical PsychologyCognitive PsychologyCounseling PsychologyDevelopmental PsychologyEducational PsychologyExperimental PsychologyHuman Factors PsychologyIndustrial/Organizational PsychologyPersonality PsychologyPsychometric PsychologySocial PsychologyPositive Psychology | **1.2: Research Methods in Psychology** *Define AND give Strengths and Weaknesses!*Descriptive Research Case Study Naturalistic Observation SurveyCorrelational Study/ResearchExperimentLongitudinalCross-SectionalElements of Research:TheoryHypothesisReplicationPopulationRandom SampleOperational DefinitionRandom Selection**1.3 The Experimental Method** Experimental GroupControl GroupIndependent VariableDependent VariableConfounding VariableDouble Blind StudyPlacebo EffectRandom Assignment**1.5 Statistical Analysis in Psychology** Descriptive Statistics Measures of Central Tendency (Mean, Median, Mode) Variance (Range & Std. Deviation)Frequency Distribution  (normal, bimodal, positive skew, negative skew)Inferential Statistics Statistical Significance (P-value and t-Tests)ScatterplotCorrelational Coefficient | EthicsInformed ConsentDebriefing Confidentiality

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| **Key People to Know:** (you should recognize these names and be able to list their contributions to psychology) |
| **Mary Whiton Calkins****Charles Darwin****Dorothea Dix****Sigmund Freud****G. Stanley Hall****William James**Abraham Maslow**Ivan Pavlov****Jean Piaget****Carl Rogers****B.F. Skinner****Margaret Floy Washburn**Edward B. Titchener**John B. Watson****Wilhelm Wundt** |

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