



## Marietta City Schools

### 2023–2024 District Unit Planner

#### AP Psychology

Unit title	Unit 2: Biological Bases of Psychology 8-10%			Unit duration (hours)	14 hours 9 Blocks
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Mastering Content and Skills through INQUIRY (Establishing the purpose of the Unit): *What will students learn?*

#### Ga DoE Standards

SSPBF1; SSPBF2; SSPBF3; SSPBF4; SSPBF5

**SSPBF1 Explain the development, structure, and function of biological systems and their role in behavior, cognition, and emotion.**

- Discuss the major divisions and sub-divisions of the nervous system and their role in behavior, include: central (brain and spinal cord) and peripheral [autonomic (sympathetic and parasympathetic) and somatic].
- Identify the components and function of a neuron.
- Explain the process of neurotransmission, include: action potentials and synaptic transmission.
- Identify the major structures and functions of the brain.
- Describe the methods used to analyze neural form and function: include the MRI, fMRI, PET, CAT, and EEG.
- Examine the role of genetics in the development of behaviors.

**SSPBF2 Compare different states of consciousness.**

- Identify altered states of consciousness, including: sleeping, dreaming, hypnosis, meditation, biofeedback, and mind-altering substances.
- Describe the sleep cycle and circadian rhythm.
- Explain theories of sleeping and dreaming.
- Investigate the validity of hypnosis.

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Resources, materials, assessments not linked to SGO or unit planner will be reviewed at the local school level.

- e. Analyze the physical and psychological issues associated with addiction.
- f. Explain how the major drug classes (stimulants, depressants, and hallucinogens) affect neurotransmission and behaviors.

**SSPBF3 Discuss the components of stress.**

- a. Categorize and explain the different physiological and psychological reactions to stress.
- b. Identify strategies to deal with stress that promote health, include: coping strategies and behavioral modification.

**SSPBF4 Describe how the physical world is translated into a psychological experience.**

- a. Describe the basic structures of the eye and ear, the associated neural pathways, and the process of sensory transduction.
- b. Recognize causes which can lead to hearing and vision deficits: include environmental causes, aging, genetics, diet, disease, and trauma.
- c. Describe the major theories associated with visual and auditory sensation and perception: include threshold theory, opponent process theory, trichromatic theory of vision, frequency theory, volley theory and place theory of hearing.
- d. Identify additional senses, include: smell, taste and touch.
- e. Analyze different perceptual illusions and describe why illusions are important for our understanding of perception.
- f. Compare top-down and bottom-up processing.

**SSPBF5 Identify major theories and concepts related to motivation and emotion.**

- a. Compare and contrast the biological, cognitive/learning, and humanistic perspectives of motivation.
- b. Compare and contrast theories of emotion, include: James-Lange, Cannon-Bard, and Singer-Schachter's Two Factor.

**Essential Questions**

How can biology influence our behavior and mental processes?

What happens when a particular neurotransmitter is absent from the body?

How do biological and environmental factors interact to influence our behaviors and mental processes?

**Assessment Tasks**

*List of common formative and summative assessments.*

**Formative Assessment(s):** -Brain Structure Quiz, -Case Studies, Play Do Brain Diagram, Vocabulary Formative, Children's Storyboard Project, Neurotransmitter Puppet Show, AP Classroom Progress Checks

**Summative Assessment(s):** Children's Book Project, Unit 2 Free Response Question, Unit 2 Summative

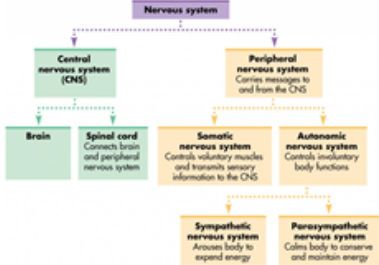
**Learning Experiences**

Add additional rows below as needed.

Objective or Content	Learning Experiences	Personalized Learning and Differentiation  All information included by PLC in the differentiation box is the responsibility and ownership of the local school to review and approve per Board Policy IKB.
2.A Discuss psychology's abiding interest in how heredity, environment, and evolution work together to shape behavior. 2.B Identify key research contributions of scientists in the area of heredity and environment 2.C Predict how traits and behavior can be selected for their adaptive value.	Unit 2 Introduction, Learning Curves and Vocabulary.  Read Biology, Behavior, and Mind.  Write on board: Everything that is Psychological is simultaneously Biological!  <ul style="list-style-type: none"> <li>• Draw a neuron-  <a href="https://www.khanacademy.org/science/high-school-biology/hs-human-body-systems/hs-the-nervous-and-endocrine-systems/v/anatomy-of-a-neuron">https://www.khanacademy.org/science/high-school-biology/hs-human-body-systems/hs-the-nervous-and-endocrine-systems/v/anatomy-of-a-neuron</a> </li> <li>• Powerpoint- Neurons, Neurotransmitters, and Neurotransmission</li> </ul> Activity- Reaction Time of Neural Transmission and Mental Processes.  Read Neural Communication.	Initially, a significant portion of teaching will be direct instruction, but as the unit progresses, students will be responsible for more independent learning with emphasis on drawing conclusions utilizing their knowledge.

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<p>2.D Discuss the effect of the endocrine system on behavior.</p>	<p>Display picture of Endocrine System</p> <ul style="list-style-type: none"> <li>- What is considered the master gland of the Endocrine System?</li> <li>- How are neurotransmitters and hormones kindred spirits?</li> </ul> <p>Read The Nervous System and Endocrine System</p>	<p>Scaffolded learning via chunking information</p>
<p>2.E Describe the nervous system and its subdivisions and functions.</p>	<p>Big Neurotransmitters: S-N-A-G-G-E-D. Chart.</p> 	<p>Pre-teach academic vocabulary through flipped learning homework</p>
<p>2.F Identify basic processes and systems in the biological bases of behavior, including parts of the neuron.</p>	<p>Crash Course Psychology: The Chemical Mind (10:13 min)  <a href="https://www.youtube.com/watch?v=W4N-7AlzK7s">https://www.youtube.com/watch?v=W4N-7AlzK7s</a></p>	<p>Extended learning via Crash course and Edpuzzle videos</p>
<p>2.G Identify basic process of transmission of a signal between neurons. 2.H Discuss the influence of drugs on neurotransmitters.</p>	<p>Mouse Party: <a href="http://learn.genetics.utah.edu/content/addiction/mouse/">http://learn.genetics.utah.edu/content/addiction/mouse/</a>           Ted Talk:  <a href="https://www.ted.com/talks/moshe_szyf_how_early_life_experience_is_written_into_dna#t-387345">https://www.ted.com/talks/moshe_szyf_how_early_life_experience_is_written_into_dna#t-387345</a> (15 min)</p>	<p>Learning through play via online game widgets</p>
<p>2.I Describe the nervous system and its subdivisions and functions in the brain. Identify the contributions of key researchers to the study of the brain.</p>	<p>Brain Notes- Powerpoint           Brain Structure/Function Review:  <a href="https://www.bing.com/videos/search?q=brain+structure+and+function&amp;&amp;view=detail&amp;mid">https://www.bing.com/videos/search?q=brain+structure+and+function&amp;&amp;view=detail&amp;mid</a></p>	<p>Extended learning via Crash course and Edpuzzle videos</p>

	<p><a href="https://www.apcentral.com/apcentral/quiz/quiz.html?quiz=F348BD098F270CE3AB5DF348BD098F270CE3AB5D&amp;&amp;FORM=VRDGAR">=F348BD098F270CE3AB5DF348BD098F270CE3AB5D&amp;&amp;FORM=VRDGAR</a></p> <p>Formative Quiz: Neural and Hormonal Systems- discuss</p> <p>Neural and Hormonal Systems Quiz on AP Classroom</p> <p>Mnemonic Device review:  <a href="https://www.youtube.com/watch?v=6xnMLr-sF7o&amp;feature=youtu.be">https://www.youtube.com/watch?v=6xnMLr-sF7o&amp;feature=youtu.be</a>  Read The Cerebral Cortex pgs. 74-81</p>	
<p>2.K Recount historic and contemporary research strategies and technologies that support research.</p> <p>2.L Identify the contributions of key researchers to the development of tools for examining the brain.</p>	<p>Crash Course Psychology #4: Meet your Master- Getting to Know your Brain  <a href="https://www.youtube.com/watch?v=vHrmiv4W9C0">https://www.youtube.com/watch?v=vHrmiv4W9C0</a> (12:33)</p> <p>Neuroimaging Techniques Jigsaw:</p> <ul style="list-style-type: none"> <li>- <i>EEG (electroencephalography)</i></li> <li>- <i>PET scan (positron emission tomography)</i></li> <li>- <i>CT scan (computerized tomography)</i></li> <li>- <i>MRI (magnetic resonance imaging)</i></li> <li>- <i>fMRI (functional MRI scanning)</i></li> </ul> <p>Reading on Tools of Discovery, Older Brain Structures, and the Limbic System. The Cerebral Cortex</p>	<p>Grouping for Technique presentations via random or self-selected</p> <p>Jigsaw technique</p>
<p>2.M Discuss the role of neuroplasticity in traumatic brain injury.</p> <p>2.N Identify the contributions of key researchers to the study of neuroplasticity.</p> <p>2.O Describe various states of consciousness and their impact on behavior.</p> <p>2.P Identify the major psychoactive drug categories and classify specific drugs,</p>	<p>Play Dough Brain Activity. Require Wernicke's and Broca's area</p> <p>BEst examples to present and discuss.</p> <p>Activity on motions with hands, feet for L-R brainedness.</p> <p>Brain Hemisphere Hats Activity</p>	<p>Self-directed learning by way of problem-based learning</p>

<p>including their psychological and physiological effects.</p> <p>2.Q Discuss drug dependence, addiction, tolerance, and withdrawal.</p> <p>2.R Identify the contributions of major figures in consciousness research.</p> <p>2.S Discuss aspects of sleep and dreaming.</p>	<p>HWK: Reading on ‘What do split brains reveal about the functions of our two brain hemispheres?’</p> <ul style="list-style-type: none"> <li>• Discuss and vote on “most accurate” brain</li> <li>• Powerpoint discussion of Divided brain with You tube video embedded: Split Brain Behavioral Experiments <a href="https://www.youtube.com/watch?v=82tIVcq6E7A&amp;t=17s">https://www.youtube.com/watch?v=82tIVcq6E7A&amp;t=17s</a> (10 min)</li> <li>• Brain Plasticity- use link on powerpoint slide</li> <li>• Split-brain worksheet- have students complete and then discuss the Divided Brain.</li> </ul> <p>Sleep Patterns, Sleep Theories, and Sleep Deprivation</p> <ul style="list-style-type: none"> <li>• States of Consciousness powerpoint</li> <li>• HW: Reading on Sleep Deprivation and Sleep Disorders</li> </ul>	
	<p>Case Studies: Give each table group butcher paper, markers, and the three case studies. They should create the three sections however they’d like while recording the structures/functions being used in each scenario.</p> <p>For each case study, see who has the most structures/functions listed. Hold and discuss. See if anyone has others to add to it.</p> <p>-Formative Quiz: Tools of Discovery, Older Brain Structures, and the Limbic System; cerebral cortex</p> <p>HW: Quiz on AP Classroom: The Brain</p> <p>Three Identical Strangers: to discuss nature vs. nurture.... And ethics (1hr 36m)</p> <p><a href="https://www.imdb.com/title/tt7664504/">https://www.imdb.com/title/tt7664504/</a></p> <p>Dream Theories and Sleep Disorders PPT</p> <p>If time permits, have a student share a dream: Use <a href="http://www.dreammoods.com">www.dreammoods.com</a> to look up and interpret some of your dreams from the group.</p>	<p>Jigsaw and Gallery Walk</p> <p>Class Discussion on today’s meet while viewing documentary.</p> <p>Teacher centered notes with guided notes and class discussion built in.</p> <p>Independent Reading.</p> <p>Table talks.</p> <p>Summative Assessments with Group.</p>

	<p>HW: read Drugs and Consciousness p.112-125</p> <p>HW: Quiz on Consciousness</p> <p>Unit 2 Kahoot, Assessment, FRQ, Vocab Due.</p>	
<b>Content Resources</b>		
<p>AP Classroom, Barron's AP Psychology, Myers Understanding Psychology 9th Edition. Ppt and Prezi Notes, Quizlet, Kahoot, Quizziz and Blookets review for all units. Request for Myers AP Psychology Third Edition.</p>		