



## Advanced Academy Biopsychology



Length of Course: Full Year

Elective/Required: Elective

Credit Value: 5 Credits

Date Approved:

Written: Saad Syed



## Understanding By Design Unit 1

### Biopsychology

<b>Title of Unit</b>	What is Biopsychology and the Scientific Method	<b>Grade Level</b>	11-12
<b>Curriculum Area</b>	Life Sciences	<b>Time Frame</b>	30 days
<b>Developed By</b>	Saad Syed		
<b>Identify Desired Results (Stage 1)</b>			
<b>Content Standards</b>			
<p>CRP1. Act as a responsible and contributing citizen and employee.</p> <p>CRP2. Apply appropriate academic and technical skills.</p> <p>CRP3. Attend to personal health and financial well-being.</p> <p>CRP4. Communicate clearly and effectively and with reason.</p> <p>CRP5. Consider the environmental, social and economic impacts of decisions.</p> <p>CRP6. Demonstrate creativity and innovation.</p> <p>CRP7. Employ valid and reliable research strategies.</p> <p>CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.</p> <p>CRP9. Model integrity, ethical leadership and effective management.</p> <p>CRP10. Plan education and career paths aligned to personal goals.</p> <p>CRP11. Use technology to enhance productivity.</p> <p>CRP12. Work productively in teams while using cultural global competence.</p>			
<b>Understandings</b>		<b>Essential Questions</b>	
Overarching Understanding		Overarching	Topical



<ol style="list-style-type: none"> <li>1. How is psychology related and different from biopsychology?</li> <li>2. How has the history of psychology influenced our understanding today?</li> <li>3. How does psychology relate to social sciences?</li> <li>4. How does psychology relate to biology?</li> <li>5. How can we differentiate the different areas in psychology?</li> <li>6. How can we use the scientific method to solve problems?</li> </ol>	<ol style="list-style-type: none"> <li>1. How can we compare biopsychology to psychology?</li> <li>2. How did early theories of psychologist differ from current logic? Sigmund Freud, Carl Jung, Alfred Adler, Erik Erikson, Jean Piaget, Abraham Maslow, Ivan Pavlov, B.F. Skinner, Solomon Asch, Stanley Milgram, Philip Zimbardo, Alfred Bandura, and Thomas Brouhard.</li> <li>3. How is psychology branched?</li> <li>4. How can the scientific method help us understand psychology?</li> </ol>	<ol style="list-style-type: none"> <li>1. How do the educational requirements differ?</li> <li>2. How did the social influences of the time effect the logic the different psychologists had. Is it possible that society has an influence on how we think and how we act?</li> <li>3. How does one obtain qualifications to practice different areas of psychology?</li> <li>4. How can the scientific method be used to prove the validity of different theories in psychology?</li> </ol>
<p><b>Related Misconceptions</b></p>		
<p><b>Knowledge</b> Students will know...</p>	<p><b>Skills</b> Students will be able to...</p>	



<ol style="list-style-type: none"> <li>1. How psychology breaks down into different areas of specialization.</li> <li>2. How the way we act is influenced by our society.</li> <li>3. How the different psychologists came up with their theories.</li> <li>4. How the scientific method can be linked to solve many problems in all aspects of life</li> </ol>	<ol style="list-style-type: none"> <li>1. Produce clear and coherent writing samples.</li> <li>2. Integrate and evaluate multiple sources of information to link the history of psychology.</li> <li>3. Work in a team to solve problems.</li> <li>4. Analyze how change occurs over time as society's perception changes.</li> <li>5. Develop a system of logic for the way society is trending.</li> </ol>
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**Assessment Evidence (Stage 2)**

**Performance Task Description**

<ul style="list-style-type: none"> <li>• Goal</li> <li>• Role</li> <li>• Audience</li> <li>• Situation</li> <li>• Product/Performance</li> <li>• Standards</li> </ul>	<p>Solve: How does society effect or mind and the way we act? Can the way we judge what is appropriate or not based on one standard rule?</p> <p>Assessments:</p> <ol style="list-style-type: none"> <li>1. 3 journal entries</li> <li>2. Exit tickets</li> <li>3. Graphic organizer</li> <li>4. Poster/PSA on achievements of psychologists (student created rubric)</li> <li>5. 2 quizzes</li> <li>6. 2 test</li> </ol>
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**Other Evidence**

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**Learning Plan (Stage 3)**



- **Where** are your students headed? Where have they been? How will you make sure the students know where they are going?
- How will you **hook** students at the beginning of the unit?
- What events will help students **experience and explore** the big idea and questions in the unit? How will you equip them with needed skills and knowledge?
- How will you cause students to **reflect and rethink**? How will you guide them in rehearsing, revising, and refining their work?
- How will you help students to **exhibit and self-evaluate** their growing skills, knowledge, and understanding throughout the unit?
- How will you **tailor** and otherwise personalize the learning plan to optimize the engagement and effectiveness of ALL students, without compromising the goals of the unit?
- How will you **organize** and sequence the learning activities to optimize the engagement and achievement of ALL students?

1. Group students in a way that they can support each other.
2. Graphic organizer on the branches of psychology
3. Each group researches a branch of psychology then prepares for a mock career day.
4. Group research on different views of psychologists (4 per day)
5. Discussions on the day's psychologists and a journal entry expressing if they are valid or false.
6. Write up on how each contribution even if false allowed for the growth of understanding the mind better.
7. Design an experiment to learn about the scientific method and test the work of past theorist.

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## Understanding By Design Unit 2

### Biopsychology

<b>Title of Unit</b>	Biological Bases of Behavior	<b>Grade Level</b>	11-12
<b>Curriculum Area</b>	Life Sciences	<b>Time Frame</b>	30 days
<b>Developed By</b>	Saad Syed		
<b>Identify Desired Results (Stage 1)</b>			
<b>Content Standards</b>			
<p>CRP1. Act as a responsible and contributing citizen and employee.</p> <p>CRP2. Apply appropriate academic and technical skills.</p> <p>CRP3. Attend to personal health and financial well-being.</p> <p>CRP4. Communicate clearly and effectively and with reason.</p> <p>CRP5. Consider the environmental, social and economic impacts of decisions.</p> <p>CRP6. Demonstrate creativity and innovation.</p> <p>CRP7. Employ valid and reliable research strategies.</p> <p>CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.</p> <p>CRP9. Model integrity, ethical leadership and effective management.</p> <p>CRP10. Plan education and career paths aligned to personal goals.</p> <p>CRP11. Use technology to enhance productivity.</p> <p>CRP12. Work productively in teams while using cultural global competence.</p>			
<b>Understandings</b>		<b>Essential Questions</b>	
Overarching Understanding		Overarching	Topical



<ol style="list-style-type: none"> <li>1. Anatomy of the Brain</li> <li>2. Brain Dominance Theories</li> <li>3. Neuro-anatomy &amp; Disease: Parkinsons, Huntington’s Chorea, Dementia with Lewey Bodies, etc.</li> <li>4. Functional Organization of Nervous System</li> <li>5. Neural Transmission</li> <li>6. Consciousness</li> <li>7. Endocrine System</li> <li>8. Glasgow Coma Scale</li> <li>9. Brain Trauma Assessment, Anterograde, Retrograde Amnesia, Fugue States, Aphasia, Stroke</li> <li>10. Neuroplasticity</li> </ol>	<ol style="list-style-type: none"> <li>1. How do the different regions in the brain regulate our mental ability and memory?</li> <li>2. How do certain illness affect the brain?</li> <li>3. How are the different states of consciousness regulated?</li> <li>4. How can we improve our neuroplasticity ?</li> </ol>	<ol style="list-style-type: none"> <li>1. How can the brain make false memories due to traumatic experiences?</li> <li>2. How is the anatomy of the brain changed when there is a disorder?</li> <li>3. How do drugs affect our brain?</li> <li>4. Do “neuroplasticity” games really improve our mental ability?</li> </ol>
<b>Related Misconceptions</b>		
<p><b>Knowledge</b></p> <p>Students will know...</p>		<p><b>Skills</b></p> <p>Students will be able to...</p>



<ol style="list-style-type: none"><li>1. Anatomy of the brain</li><li>2. How memory is stored</li><li>3. How disorders effect the brain</li><li>4. How we can improve our mental ability</li></ol>	<ol style="list-style-type: none"><li>1. Produce clear and coherent writing samples.</li><li>2. Integrate and evaluate multiple sources of information to understand how the brain works.</li><li>3. Work in a team to solve problems.</li><li>4. Analyze how disorders influence the brain.</li><li>5. Develop a method to inform the school how to keep the brain healthy.</li></ol>
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**Assessment Evidence (Stage 2)**

**Performance Task Description**

<ul style="list-style-type: none"><li>• Goal</li><li>• Role</li><li>• Audience</li><li>• Situation</li><li>• Product/ Performance</li><li>• Standards</li></ul>	<p>Solve:</p> <ol style="list-style-type: none"><li>1. How does the brain work and how do chemicals influence its function?</li><li>2. How can we keep our brain healthy well into our old age?</li></ol> <p>Assessments:</p> <ol style="list-style-type: none"><li>1. 3 journal entries</li><li>2. Exit tickets</li><li>3. Graphic organizer</li><li>4. Poster/PSA on achievements of psychologists (student created rubric)</li><li>5. 2 quizzes</li><li>6. 2 test</li></ol>
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**Other Evidence**

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**Learning Plan (Stage 3)**





<ul style="list-style-type: none"><li>• <b>Where</b> are your students headed? Where have they been? How will you make sure the students know where they are going?</li><li>• How will you <b>hook</b> students at the beginning of the unit?</li><li>• What events will help students <b>experience and explore</b> the big idea and questions in the unit? How will you equip them with needed skills and knowledge?</li><li>• How will you cause students to <b>reflect and rethink</b>? How will you guide them in rehearsing, revising, and refining their work?</li><li>• How will you help students to <b>exhibit and self-evaluate</b> their growing skills, knowledge, and understanding throughout the unit?</li><li>• How will you <b>tailor</b> and otherwise personalize the learning plan to optimize the engagement and effectiveness of ALL students, without compromising the goals of the unit?</li><li>• How will you <b>organize</b> and sequence the learning activities to optimize the engagement and achievement of ALL students?</li></ul>	<ol style="list-style-type: none"><li>1. Graphic organizer on the parts of the brain</li><li>2. Research different functions of the brain</li><li>3. Discussion on how it is possible to make memories</li><li>4. Discussion on how traumatic experiences can make false memories</li><li>5. Poster/PSA on how to keep the brain fit</li><li>6. Lab - Best Brain Competition</li><li>7. Simulation: Left Brain / Right Brain</li><li>8. Simulation: Reaction Time and Texting</li><li>9. Video Clips: TED Conference: Oliver Sacks</li><li>10. Interactive Activity: Rabbit Game: What Drugs do to your Brain.</li><li>11. Video Clips: Reflex Examples: Patellar, Coen's, Tonic, Fencer, Moro</li><li>12. Video Clip: <i>Joe's Split Brain Surgery</i></li><li>13. NOVA episode: Daniel Tammet (Born on a Blue Day)</li></ol> <p>Readings: "<i>The Man Who Mistook his Wife for a Hat</i>" "<i>My Lobotomy</i>" <i>Phineas Gage</i> The Blood Brain Barrier</p>
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## Understanding By Design Unit 3



## Biopsychology

<b>Title of Unit</b>	States of Consciousness	<b>Grade Level</b>	11-12
<b>Curriculum Area</b>	Life Sciences	<b>Time Frame</b>	30 days
<b>Developed By</b>	Saad Syed		
<b>Identify Desired Results (Stage 1)</b>			
<b>Content Standards</b>			
<p>CRP1. Act as a responsible and contributing citizen and employee.</p> <p>CRP2. Apply appropriate academic and technical skills.</p> <p>CRP3. Attend to personal health and financial well-being.</p> <p>CRP4. Communicate clearly and effectively and with reason.</p> <p>CRP5. Consider the environmental, social and economic impacts of decisions.</p> <p>CRP6. Demonstrate creativity and innovation.</p> <p>CRP7. Employ valid and reliable research strategies.</p> <p>CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.</p> <p>CRP9. Model integrity, ethical leadership and effective management.</p> <p>CRP10. Plan education and career paths aligned to personal goals.</p> <p>CRP11. Use technology to enhance productivity.</p> <p>CRP12. Work productively in teams while using cultural global competence.</p>			
<b>Understandings</b>		<b>Essential Questions</b>	
Overarching Understanding		Overarching	Topical



<ol style="list-style-type: none"><li>1. How do we go into different states of Consciousness?</li><li>2. How does sleep effect our health?</li><li>3. How do the different states of sleep influence our brain?</li><li>4. How do sleep disorders effect the brain?</li><li>5. How can hypnosis be used to treat patients?</li></ol>	<ol style="list-style-type: none"><li>1. How do the different states of consciousness differ?</li><li>2. How does sleep effect the function of the brain?</li><li>3. How can we treat sleep disorders?</li></ol>	<ol style="list-style-type: none"><li>1. How can control of the states of consciousness help to treat patients?</li><li>2. How can we promote better sleeping habits?</li><li>3. How can hypnosis be used to help patients?</li></ol>
<b>Related Misconceptions</b>		
<b>Knowledge</b> Students will know...		<b>Skills</b> Students will be able to...



<ol style="list-style-type: none"> <li>1. How the states of consciousness relate to our sleep.</li> <li>2. How sleep is an important part of a healthy brain.</li> <li>3. How sleep disorders effect the brain.</li> <li>4. How hypnosis can be used to treat patients.</li> </ol>	<ol style="list-style-type: none"> <li>1. Produce clear and coherent writing samples.</li> <li>2. Integrate and evaluate multiple sources of information to understand the stages of sleep.</li> <li>3. Work in a team to solve problems.</li> <li>4. Analyze how sleep disorders influence the brain.</li> </ol>
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**Assessment Evidence (Stage 2)**

**Performance Task Description**

<ul style="list-style-type: none"> <li>• Goal</li> <li>• Role</li> <li>• Audience</li> <li>• Situation</li> <li>• Product/ Performance</li> <li>• Standards</li> </ul>	<p style="text-align: center;">Solve:</p> <ol style="list-style-type: none"> <li>1. How do the different states of sleep help the brain function?</li> <li>2. How can we promote healthy sleep habits in the modern world?</li> </ol> <p style="text-align: center;">Assessments:</p> <ol style="list-style-type: none"> <li>1. 3 journal entries</li> <li>2. Exit tickets</li> <li>3. Graphic organizer</li> <li>4. Poster/PSA on achievements of psychologists (student created rubric)</li> <li>5. 2 quizzes</li> <li>6. 2 test</li> </ol>
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**Other Evidence**

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**Learning Plan (Stage 3)**



1. **Where** are your students headed? Where have they been? How will you make sure the students know where they are going?
2. How will you **hook** students at the beginning of the unit?
3. What events will help students **experience and explore** the big idea and questions in the unit? How will you equip them with needed skills and knowledge?
4. How will you cause students to **reflect and rethink**? How will you guide them in rehearsing, revising, and refining their work?
5. How will you help students to **exhibit and self-evaluate** their growing skills, knowledge, and understanding throughout the unit?
6. How will you **tailor** and otherwise personalize the learning plan to optimize the engagement and effectiveness of ALL students, without compromising the goals of the unit?
7. How will you **organize** and sequence the learning activities to optimize the engagement and achievement of ALL students?

1. Allow students to group together to investigate the states of consciousness then have them evaluate the importance.
2. **Lab** - Sleep Experiment & Sleep Journal
3. Data Analysis: Amount of students who slept, woke up before the bell (how many minutes), at the bell, after the bell. Compare Classes and total overall averages - break down data into male/female
4. What are dreams and have students record their dreams
5. Investigate hypnosis
6. Video Clips: Catalepsy, REM Behavior Disorder, Sleep Terrors
7. Reading: *The Interpretation of Dreams*: Sigmund Freud
8. Make a poster to raise awareness for better sleeping habits



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## Understanding By Design Unit 4

### Biopsychology

<b>Title of Unit</b>	Behavior, Heredity, and the Environment	<b>Grade Level</b>	11-12
<b>Curriculum Area</b>	Life Sciences	<b>Time Frame</b>	30 days
<b>Developed By</b>	Saad Syed		
<b>Identify Desired Results (Stage 1)</b>			
<b>Content Standards</b>			
<p>CRP1. Act as a responsible and contributing citizen and employee.</p> <p>CRP2. Apply appropriate academic and technical skills.</p> <p>CRP3. Attend to personal health and financial well-being.</p> <p>CRP4. Communicate clearly and effectively and with reason.</p> <p>CRP5. Consider the environmental, social and economic impacts of decisions.</p> <p>CRP6. Demonstrate creativity and innovation.</p> <p>CRP7. Employ valid and reliable research strategies.</p> <p>CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.</p> <p>CRP9. Model integrity, ethical leadership and effective management.</p> <p>CRP10. Plan education and career paths aligned to personal goals.</p> <p>CRP11. Use technology to enhance productivity.</p> <p>CRP12. Work productively in teams while using cultural global competence.</p>			
<b>Understandings</b>		<b>Essential Questions</b>	
Overarching Understanding		Overarching	Topical



<ol style="list-style-type: none"> <li>1. Evaluate the basic pattern of development for the brain.</li> <li>2. Evaluate handicaps?</li> <li>3. How do hereditary and environmental factors influence development?</li> <li>4. How to take family histories</li> <li>5. How to glands affect psychological and physiological responses.</li> </ol>	<ol style="list-style-type: none"> <li>1. How does the brain develop?</li> <li>2. How can our genes and environment influence our behavior?</li> <li>3. How can talking family histories help diagnosing patients?</li> <li>4. How can different glands control our brain?</li> </ol>	<ol style="list-style-type: none"> <li>1. How can drugs and other chemicals affect the growth of the fetus?</li> <li>2. How can we truly be ourselves if so many factors influence our personality?</li> <li>3. How do you take family histories?</li> <li>4. How can patients with issues with glands cause a psychological malfunction?</li> </ol>
<b>Related Misconceptions</b>		
<b>Knowledge</b>		<b>Skills</b>
Students will know...		Students will be able to...
<ol style="list-style-type: none"> <li>1. How changes occur in brain development.</li> <li>2. How glands affect the brain,</li> <li>3. How to take family history.</li> </ol>		<ol style="list-style-type: none"> <li>1. Evaluate factors that cause brain development.</li> <li>2. Produce clear and coherent writing samples.</li> <li>3. Integrate and evaluate multiple sources of information to understand the development of the brain.</li> <li>4. Work in a team to solve problems.</li> </ol>



**Assessment Evidence (Stage 2)**

**Performance Task Description**

1. Goal
2. Role
3. Audience
4. Situation
5. Product/  
Performance
6. Standards

Solve:

1. How can we take family histories to better get to know the patient?
2. How does heredity and the environment play a role in brain development and function?

Assessments:

1. 3 journal entries
2. Exit tickets
3. Graphic organizer
4. Poster/PSA on achievements of psychologists (student created rubric)
5. 2 quizzes
6. 2 test

**Other Evidence**

**Learning Plan (Stage 3)**





1. **Where** are your students headed? Where have they been? How will you make sure the students know where they are going?
2. How will you **hook** students at the beginning of the unit?
3. What events will help students **experience and explore** the big idea and questions in the unit? How will you equip them with needed skills and knowledge?
4. How will you cause students to **reflect and rethink**? How will you guide them in rehearsing, revising, and refining their work?
5. How will you help students to **exhibit and self-evaluate** their growing skills, knowledge, and understanding throughout the unit?
6. How will you **tailor** and otherwise personalize the learning plan to optimize the engagement and effectiveness of ALL students, without compromising the goals of the unit?
7. How will you **organize** and sequence the learning activities to optimize the engagement and achievement of ALL students?

1. Have student interview parents, guardians, siblings about how they developed when they were young.
2. Test piaget's conservation principles
3. Select two beliefs, interests, or attitudes you may have and try to determine how they came to be. When did they originate? How did they develop?
4. Assume you have discovered a 12 year old who has been raised by wolves since birth and has average intelligence. Describe the procedures you would use in helping this person develop appropriate social behavior and speech.
5. Debate: have one team provide evidence of how environmental is the major influence in the development of the individual. The other team should show how heredity is of primary importance in the development of a person. Discuss the fallacy.
6. Write family history



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## Understanding By Design Unit 5

### Biopsychology

<b>Title of Unit</b>	Personality Development and Intellectual Ability	<b>Grade Level</b>	11-12
<b>Curriculum Area</b>	Life Sciences	<b>Time Frame</b>	30 days
<b>Developed By</b>	Saad Syed		

#### Identify Desired Results (Stage 1)

#### Content Standards

- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP3. Attend to personal health and financial well-being.
- CRP4. Communicate clearly and effectively and with reason.
- CRP5. Consider the environmental, social and economic impacts of decisions.
- CRP6. Demonstrate creativity and innovation.
- CRP7. Employ valid and reliable research strategies.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP9. Model integrity, ethical leadership and effective management.
- CRP10. Plan education and career paths aligned to personal goals.
- CRP11. Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.

<b>Understandings</b>	<b>Essential Questions</b>	
Overarching Understanding	Overarching	Topical



<ul style="list-style-type: none"> <li>▪ How do psychoanalytic, social psychoanalytic, social learning, behavioristic and humanistic theories differ.</li> <li>▪ How is personality measured</li> <li>▪ How is IQ measured</li> </ul>	<ol style="list-style-type: none"> <li>1. How can the different theories relate to each other and how are they different.</li> <li>2. How can personality be measured?</li> <li>3. How can IQ be used to measure intelligence?</li> </ol>	<ol style="list-style-type: none"> <li>1. How do the psychologists that find these theories make their logic what is the evidence?</li> <li>2. How can we assure that the test used to measure personality is not flawed?</li> <li>3. How can the use of IQ testing not give accurate results?</li> </ol>
<b>Related Misconceptions</b>		
<b>Knowledge</b>		<b>Skills</b>
Students will know...		Students will be able to...
<ol style="list-style-type: none"> <li>1. Theories on personality</li> <li>2. How to measure personality and IQ</li> </ol>		<ol style="list-style-type: none"> <li>1. Evaluate factors that cause brain development.</li> <li>2. Produce clear and coherent writing samples.</li> <li>3. Integrate and evaluate multiple sources of information to understand the development of the brain.</li> </ol>
<b>Assessment Evidence (Stage 2)</b>		
<b>Performance Task Description</b>		



<ul style="list-style-type: none"><li>▪ Goal</li><li>3. Role</li><li>• Audience</li><li>• Situation</li><li>• Product/Performance</li><li>• Standards</li></ul>	<p>Solve: How did society of the time influence the different personality theories?</p> <p>Assessments:</p> <ol style="list-style-type: none"><li>1. 3 journal entries</li><li>2. Exit tickets</li><li>3. Graphic organizer</li><li>4. Poster/PSA on achievements of psychologists (student created rubric)</li><li>5. 2 quizzes</li><li>6. 2 test</li></ol>
<b>Other Evidence</b>	
<b>Learning Plan (Stage 3)</b>	



- **Where** are your students headed? Where have they been? How will you make sure the students know where they are going?
- How will you **hook** students at the beginning of the unit?
- What events will help students **experience and explore** the big idea and questions in the unit? How will you equip them with needed skills and knowledge?
- How will you cause students to **reflect and rethink**? How will you guide them in rehearsing, revising, and refining their work?
- How will you help students to **exhibit and self-evaluate** their growing skills, knowledge, and understanding throughout the unit?
- How will you **tailor** and otherwise personalize the learning plan to optimize the engagement and effectiveness of ALL students, without compromising the goals of the unit?
- How will you **organize** and sequence the learning activities to optimize the engagement and achievement of ALL students?

1. Write how the roles of the home, birth order, and society play in personality development.
2. Evaluate psychoanalytic techniques
3. Discuss Adler, Sullivan, Erikson, Kohlberg, Jung, Horney, Ellis
4. Research learning disabilities
5. Binet and Wechsler tests
6. Activity: Create your own Intelligence Test - Choose your area of expertise and write down 3 questions and answers. The class will answer these questions. Do their answers illustrate intelligence?
7. Computer Activity: What's your learning style?
8. Video Episode: The World of Jenks: "Can't Make me Be Me" Chad Episode.
9. Video Clip: Section of "Best Boy" Academy Award Winning Documentary. Ira Wohl.

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## Understanding By Design Unit 6

### Biopsychology

<b>Title of Unit</b>	The Human Brain	<b>Grade Level</b>	11-12
<b>Curriculum Area</b>	Life Sciences	<b>Time Frame</b>	30 days
<b>Developed By</b>	Saad Syed		

#### Identify Desired Results (Stage 1)

#### Content Standards

- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP3. Attend to personal health and financial well-being.
- CRP4. Communicate clearly and effectively and with reason.
- CRP5. Consider the environmental, social and economic impacts of decisions.
- CRP6. Demonstrate creativity and innovation.
- CRP7. Employ valid and reliable research strategies.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP9. Model integrity, ethical leadership and effective management.
- CRP10. Plan education and career paths aligned to personal goals.
- CRP11. Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.

<b>Understandings</b>	<b>Essential Questions</b>	
Overarching Understanding	Overarching	Topical



<ol style="list-style-type: none"> <li>1. How do the areas of the brain work?</li> <li>2. How does the placebo/nocebo effect work?</li> <li>3. How can the brain and body have a connection that allows for awareness?</li> <li>4. How does meditation and biofeedback relate to neuroplasticity?</li> <li>5. How does the intelligence of people with savant syndrome compare to those that are classified as normal?</li> </ol>	<ol style="list-style-type: none"> <li>1. How are the different areas of the brain connected?</li> <li>3. How can the placebo effect help in studies?</li> <li>4. How is the complete mind body connection important to health?</li> <li>5. How can meditation, biofeedback, and yoga help people?</li> <li>6. How is function of the brain influenced when someone has savant syndrome?</li> </ol>	<ol style="list-style-type: none"> <li>1. How does damage in these area affect function and what are the specific disorders called?</li> <li>3. How can the placebo effect be used to treat patients?</li> <li>4. How can patients who are disconnected with the mind and body be helped?</li> <li>5. How can we prove the effectiveness of meditation?</li> <li>6. How are some areas of the brain enhanced when someone has savant syndrome?</li> </ol>
<b>Related Misconceptions</b>		
<p><b>Knowledge</b></p> <p>Students will know...</p>	<p><b>Skills</b></p> <p>Students will be able to...</p>	



<ol style="list-style-type: none"><li>1. How the mind body connection is needed.</li><li>2. How meditation can help the body</li><li>3. How savant syndrome effects people</li></ol>	<ol style="list-style-type: none"><li>1. How to design a scientific experiment</li><li>2. Research</li><li>3. Evaluate information</li></ol>
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**Assessment Evidence (Stage 2)**

**Performance Task Description**

<ul style="list-style-type: none"><li>• Goal</li><li>• Role</li><li>• Audience</li><li>• Situation</li><li>• Product/ Performance</li><li>• Standards</li></ul>	<p>Solve:</p> <ol style="list-style-type: none"><li>1. Design an experiment that will prove the effectiveness of meditation and yoga and provide data in the form of a scientific report.</li><li>2. Design an experiment to explain how injuries in the brain can effect function.</li></ol> <p>Assessments:</p> <ul style="list-style-type: none"><li>• 3 journal entries</li><li>• Exit tickets</li><li>• Graphic organizer</li><li>• Poster/PSA on achievements of psychologists (student created rubric)</li><li>• 2 quizzes</li><li>• 2 test</li></ul>
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**Other Evidence**

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**Learning Plan (Stage 3)**





- **Where** are your students headed? Where have they been? How will you make sure the students know where they are going?
  - How will you **hook** students at the beginning of the unit?
  - What events will help students **experience and explore** the big idea and questions in the unit? How will you equip them with needed skills and knowledge?
  - How will you cause students to **reflect and rethink**? How will you guide them in rehearsing, revising, and refining their work?
  - How will you help students to **exhibit and self-evaluate** their growing skills, knowledge, and understanding throughout the unit?
  - How will you **tailor** and otherwise personalize the learning plan to optimize the engagement and effectiveness of ALL students, without compromising the goals of the unit?
  - How will you **organize** and sequence the learning activities to optimize the engagement and achievement of ALL students?
1. Students should be given options to design an experiment they can investigate injuries to different areas of the brain, the placebo effect, or savant syndrome.
  2. Links should be provided to research journal articles
  3. Students should create and perform their experiment and collect data.
  4. Students should use the structure of their journal articles to help them evaluate their experiment and write an article.

From: Wiggins, Grant and J. Mc Tighe. (1998). *Understanding by Design*, Association for Supervision and Curriculum Development

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