

Unit Three

The Biological Aspects of Psychology

Directions: As an introduction to the unit, this is a quote to give you the chance to think about the concepts we are about to discuss. Determine which letter from the choices above is the correct one and fits into the spaces below. When you are finished fill in the quote below.

A quote from a Dutch person:

A	O		O	U		A			O	U		P		T	I		N	R	E		I	S	
W	N	R	T	H	N	C	E	P	O	F	N	D	A	O	F	E	B	C	A	I	N	S	

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DISCOVERING PSYCHOLOGY

THE BEHAVING BRAIN

Directions: This will be due at the end of this film. You are to answer the following questions. The concepts are presented chronologically during the film.

1. About how many neurons does an average brain have?
2. What are the two types of synaptic junctures?
3. What is the basic idea behind the new Neuro Science?
4. What is the purpose and or function of the brain stem?
5. What is the purpose and or function of the cerebellum?
6. What is the purpose and or function of the limbic system?
7. What is the purpose and or function of the amygdala?
8. What is the purpose and or function of the hippocampus?
9. What is the purpose and or function of the hypothalamus?
10. What is the purpose and or function of the thalamus?
11. What is the purpose and or function of the cerebrum?
12. What is the purpose and or function of the corpus callosum?
13. What is an E.E.G.?
14. What is a basic definition for the word "neurometrics"?
15. What is the black box theory?
16. How does scopolamine affect the synaptic juncture and in this case memory?
17. How does physostigmine affect the synaptic juncture and in this case memory?

DISCOVERING PSYCHOLOGY

THE RESPONSIVE BRAIN

Directions: This will be due at the end of this film. You are to answer the following questions. The concepts are presented chronologically during the film.

1. The film suggests that the brain is reciprocal. What does that mean?
2. What does research seem to suggest about the differences between people who are "touchers" and people who are "not touchers"?
3. In a recent study about premature infants, what variable was found to help the babies grow faster and have greater cognitive ability later in life?
4. How is the production of O.D.C. an enzyme effected by mothers touch?
5. As a result of studies involving O.D.C. research in rats, what do we believe about mother's touch?
6. What can be done to reverse the deprivation in touch deprived rats?
7. What is psychosocial dwarfism, and what do we believe is its cause?
8. How is the hypothalamus effected by attention and touch?
9. How tall did children who were therapeutically touched grow in one year?
10. What is the relationship between glucocorticoids a hormone and the hippocampus?
11. As a result of this research, what do we know about "handled animals" and the stress response?
12. In the African Cyclit Fish Studies, what happens to the male fish's ability to reproduce if it is not social successful and or dominant?
13. In the baboon studies, what happens to baboons who become social successful?
14. What seems to the be the logical conclusion drawn from each of these studies?

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The Biological Aspects of Psychology

Directions: match each concept to the appropriate statement, and write the corresponding letter in the space provided. Be ready to justify your answers.

1. _____ Share the same heredity
2. _____ Relays message from the sense organs to the cerebral cortex
3. _____ Carry impulses across the synaptic gap
4. _____ Transmit impulses away from the neuron cell body
5. _____ Regulates specific body functions
6. _____ Send messages between the central nervous system and the body
7. _____ Connects the left and right hemispheres
8. _____ Passes x-ray beams through the head
9. _____ Consists of two hemispheres
10. _____ Regulates body functions, such as respiration
11. _____ Junction between the terminal buttons and dendrites
12. _____ Contains genes, the basic units of heredity
13. _____ Building block of heredity
14. _____ Secrete hormones in the bloodstream
15. _____ Records the electrical activity of the brain
16. _____ Building block of the Nervous System
17. _____ Transmission of traits from one generation to the next
18. _____ Fibers branching out from an axon
19. _____ Receives impulses and conducts them toward the cell body
20. _____ Located above the kidney

Concepts

- | | | | |
|-----------------------------|-------------------|-------------|-----------|
| a. NEUROTRANSMITTERS | g. AXON TERMINAL | m. THYROID | s. R.A.S. |
| b. CORPUS COLLOSUM | h. OCCIPITAL LOBE | n. CEREBRUM | t. AXON |
| c. AUTONOMIC NERVOUS SYSTEM | i. THALMUS | o. DENDRITE | u. PONS |
| d. IDENTICAL TWINS | j. HORMONE | p. HEREDITY | v. NEURON |
| e. ADRENAL GLANDS | k. CHROMOSOME | q. SYNAPSE | w. GENE |
| f. ENDOCRINE GLANDS | l. PERIPHERAL | r. CAT SCAN | x. EEG |

Unit Three

The Biological Aspects of Psychology

DIRECTIONS: Define or explain the significance of each of the following concepts. These concepts are directly taken from the Chapter Test.

ABILITY TO CREATE LANGUAGE

ADRENAL GLANDS

ALCOHOLISM

ANXIETY

ASSOCIATION AREA

AUTONOMIC NERVOUS SYSTEM

AXON

BROCA

CENTRAL

CEREBELLUM

CEREBRAL CORTEX

CEREBRUM

DENDRITE

DIZYGOTIC

DEPRESSION

ELECTROENCEPHALOGRAMS

ENDOCRINE SYSTEM

FIGHT-OR-FLIGHT

FOREBRAIN

FOUR

GENES

HORMONE

HYPOTHALAMUS

KINSHIP

LEFT HEMISPHERE OF THE BRAIN

LIMBIC SYSTEM

MASTER GLAND

MEDULLA

MYELIN

NEURON

NEUROTRANSMITTER

PARASYMPATHETIC

PERIPHERAL

PINEAL

PONS

RIGHT HEMISPHERE OF THE BRAIN

SCHIZOPHRENIA

SOMATIC NERVOUS SYSTEM

SPINAL CORD

SYMPATHETIC

SYNAPSE

THALAMUS

THE CORPUS CALLOSUM

THE PITUITARY GLAND

THYROID

TWINS STUDIES

TWO MAIN DIVISIONS

WERNICKE

X-RAY

Unit Three

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A crossword puzzle grid with 38 numbered starting points for words. The grid is composed of empty squares for letters, with some squares blocked out. The numbers are: 1 (top center), 2 (top center), 3 (top right), 4 (left), 5 (top center), 6 (top right), 7 (left), 8 (top right), 9 (left), 10 (top right), 11 (middle left), 12 (middle right), 13 (middle right), 14 (middle left), 15 (right), 16 (middle left), 17 (left), 18 (middle right), 19 (middle right), 20 (middle left), 21 (middle right), 22 (middle left), 23 (middle right), 24 (right), 25 (middle left), 26 (middle right), 27 (left), 28 (left), 29 (middle left), 30 (right), 31 (right), 32 (middle left), 33 (middle left), 34 (left), 35 (middle left), 36 (middle right), 37 (left), 38 (bottom center).

Across

1. An injury to the _____ cord could interfere with the transmittal of messages to the muscles.
5. The hindbrain includes the medulla, cerebellum, and _____.
6. Most likely, the interaction between heredity and _____ shapes human behavior.
7. An injury to the spinal cord could _____ the transmittal of messages from the brain.
8. Our thinking processes take place in the _____.
9. Cortical _____ are secreted by the adrenal glands.
10. A _____ is a chemical produced by the endocrine glands that regulates specific body functions.
11. The _____ nervous system is the part of the peripheral nervous system that controls voluntary activities.
13. When _____ is released into the bloodstream, one's breathing and heartbeat increase.
14. Fraternal twins are also called _____ twins.
16. The _____ nervous system regulates the action of the involuntary muscles and organs.
17. An insufficient amount of _____ in the bloodstream causes laziness and lethargy.
18. The _____ areas of the brain mediate between other areas and do most of the synthesizing of information.
20. Identical twins share many common _____.
21. The all-or-none principle describes how the _____ fire.
22. In the nature-nurture question, nature refers to _____ makeup.
26. The brain's _____ hemisphere controls speech in most people.
27. In a grand _____ seizure uncontrolled electrical activity in one hemisphere of the brain spreads to the other hemisphere.
29. The brain and spinal cord make up the _____ nervous system.
31. The _____ sheath is a white, fatty substance that insulates axons and enables rapid transmissions of neural impulses.
33. Identical twins develop from a single fertilized _____.
35. Dominance is based on which _____ of the brain has more influence over bodily function.
37. The EEG monitors _____ activity in the brain.
38. The _____ gland may affect the sleep cycle and inhibits reproductive functions.

Down

2. The _____ is involved in producing the chemicals that the body needs to sleep.
3. The nervous system and the _____ system send information to and from the brain.
4. The _____ nervous system works to conserve energy.
5. The "master gland" of the endocrine system is the _____ gland.
12. Synapses are the _____ between neurons.
13. The reticular _____ system alerts the rest of the brain to incoming signals.
15. An injury to the spinal cord could result in _____.
19. The _____ system receives messages through receptors to carry out routine activities like breathing and digestion.
23. The band of nerves that connects the hemispheres of the brain is the corpus _____.
24. Testosterone is a _____ that is important to the physical development of men.
25. Regions of the _____ cortex are referred to as lobes.
28. The _____ system contains the structures of the brain that regulate our emotions and motivations.
30. The spinal cord is protected by _____.
32. Identical twins may have similar _____.
34. Identical twins share the same _____.
36. Researchers verified Dr. _____ Broca's discovery of the connection between the brain and speech using PET scans.