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The Greek Prefix neuro-

Definition

The prefix "**neuro-**" comes from Ancient Greek and means "nerve" or "relating to the nervous system." It appears in scientific and medical terms about the brain and nerves.

Example

Word	Definition
Neurology	Study of the nervous system and its disorders
Neuroscience	Scientific study of the nervous system and brain
Neurotransmitter	Chemical that transmits signals between nerve cells
Neuroplasticity	Brain's ability to reorganize by forming new neural connections
Neurosurgeon	Physician specializing in nervous system surgery

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PART 1: Multiple Choice

Choose the best definition for each "neuro-" word as it relates to Polynesian navigation techniques.

1. Polynesian navigators developed "neuro-spatial" abilities, which means they had exceptional:

- a) Nerve endings in their hands for feeling ocean currents
- b) Brain-based abilities to mentally map and visualize spatial information
- c) Nervous system disorders from long sea voyages
- d) Neurotransmitters that helped them sleep during rough waters

2. The "neuro-sensory" skills of traditional navigators refer to their:

- a) Brain surgery techniques used at sea
- b) Nerve problems caused by vitamin deficiency
- c) Brain and sensory system's ability to process environmental information
- d) Neural networks that control boat building

3. Studying the "neurocognitive" aspects of wayfinding involves understanding:

- a) How the brain processes and remembers navigation information
- b) How nerves in the feet feel the movement of canoes
- c) How to surgically repair damage to navigators' brains
- d) How to build neural networks for modern GPS systems

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PART 2: Fill in the Blank

Complete each sentence with the most appropriate "neuro-" term from the word bank.

Word Bank:

neuroscientists | neuroplasticity | neural pathways | neuro-environmental | neurocognitive

1. Modern _____ study how Polynesian navigators could memorize vast star maps without written records.
2. The _____ of experienced navigators became specialized for detecting subtle changes in ocean swells.
3. The amazing _____ of the human brain allowed navigators to develop mental maps of hundreds of islands across thousands of miles.
4. _____ factors such as wave patterns, star positions, and wind direction provided crucial information to traditional navigators.
5. The _____ skills required for traditional navigation include memory, spatial reasoning, and pattern recognition.

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PART 3: Word Analysis

Break down each "neuro-" term related to Polynesian navigation into its parts and explain what the complete word means.

1. Neuronavigation

Parts:

neuro- = _____;

navigation = _____

Complete meaning:

2. Neurospatial

Parts:

neuro- = _____;

spatial = _____

Complete meaning:

3. Neuroadaptive

Parts: neuro- = _____;

adaptive = _____

Complete meaning:

4. Neurosensory

Parts: neuro- = _____; sensory = _____

Complete meaning:

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PART 4: Connect the Concepts

Match each "neuro-" concept with the Polynesian navigation technique it best describes.

1. ____ Neuroplasticity
 2. ____ Neural mapping
 3. ____ Neurosensory integration
 4. ____ Neuroenvironmental awareness
 5. ____ Neurocognitive memory systems
-
- a) Reading the patterns of ocean swells to determine direction and proximity to land
 - b) Memorizing the rising and setting positions of hundreds of stars
 - c) The brain's ability to develop specialized navigation skills through practice and training
 - d) Creating mental maps of island positions across vast ocean spaces
 - e) Synthesizing information from stars, clouds, birds, waves, and wind to determine position

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The Greek Prefix neuro – Answer Key

ANSWER KEY

PART 1: Multiple Choice

1. b) Brain-based abilities to mentally map and visualize spatial information
2. c) Brain and sensory system's ability to process environmental information
3. a) How the brain processes and remembers navigation information

PART 2: Fill in the Blank

1. neuroscientists
2. neural pathways
3. neuroplasticity
4. neuro-environmental
5. neurocognitive

PART 3: Word Analysis

Neuronavigation

Parts: neuro- = relating to nerves or the nervous system;
navigation = finding one's way

Complete meaning: The brain-based processes involved in determining location and direction

Neurospatial

Parts: neuro- = relating to nerves or the nervous system; spatial = relating to space

Complete meaning: Brain processes related to understanding and mapping physical space

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The Greek Prefix neuro – Answer Key

Neuroadaptive

Parts: neuro- = relating to nerves or the nervous system;
adaptive = able to change

Complete meaning: How the brain and nervous system
change in response to navigation challenges

Neurosensory

Parts: neuro- = relating to nerves or the nervous system;
sensory = related to the senses

Complete meaning: How the brain processes information
from the senses for navigation

PART 4: Connect the Concepts

- c) The brain's ability to develop specialized navigation skills through practice and training
- d) Creating mental maps of island positions across vast ocean spaces
- a) Reading the patterns of ocean swells to determine direction and proximity to land
- e) Synthesizing information from stars, clouds, birds, waves, and wind to determine position
- b) Memorizing the rising and setting positions of hundreds of stars