

Science Education Collection

Perspectives on Neuropsychology

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Overview

Source: Laboratories of Jonas T. Kaplan and Sarah I. Gimbel— University of Southern California

Neuropsychology is a complex field, as it investigates how mental processes are executed in the brain—events that integrate concepts from biochemistry, biology, psychology, and neuroscience. Although the multidisciplinary nature of neuropsychology prepares young learners for a variety of careers, it also poses a challenge in that it forces students to study concepts outside of their comfort zone. For example, a psychology major may have difficulty grasping neuroanatomy—a challenging topic in itself—given that the brain is a complicated, three-dimensional organ that is typically represented two-dimensionally in textbooks.

This JoVE collection in Neuropsychology introduces major concepts and methods in the field, and showcases how advances in imaging technology have allowed us to look inside the brain and visualize its structure and function. Importantly, these videos are also meant to reassure students that you don't need to be an expert in all aspects of neuropsychology to understand how the brain shapes our experiences, behaviors, and social interactions in everyday life. For instance, the video "Decision-making and the Iowa Gambling Task" explores how damage to a specific region of the brain can affect an individual's proclivity for risky decisions, like stealing.

These JoVE videos in Neuropsychology provide the perfect introduction to this complex topic, and also explore some of the potential, exciting future directions in this field. With further advances in technology, one day researchers might even be able to visualize dynamic changes in a person's brain outside of a laboratory setting—for example, when they are sitting in a classroom listening to a lecture on neuropsychology.