

Promoting Interest in STEM through the Lens of Neuroscience

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Introduction

The Neuroscience 215: Applications in Neuroscience course focuses on engaging the community through STEM (Science, Technology, Engineering, and Mathematics) outreach. Students in the course design educational seminars for the RKids Program, sponsored by AmeriCorps, which provides a safe environment for children of low socioeconomic status. These educational sessions are designed to cultivate an interest. .

Methods

Session 1: Students constructed and decorated paper brain hats to learn the lobes of the brain. As students decorated their hat, facilitators explained the function of each lobe. Students played a "Simon Says" style game to rehearse the lobes of the brain.

Session 2: Students observe electroencephalogram (EEG) demonstration. Facilitators explained that an EEG tracks electrical activity in the brain as students observed EEG output on a screen. Students learned that monitoring heightened activity in different brain regions is a central part of neuroscience experiments. Students also toured the Integrated Science Center.

Session 3: Students dissected a gelatin brain model to test their knowledge of the brain lobes. Students had to eat the lobe of the brain when they retrieved beads within the model



Figure 1. Participant cuts out brain hat during Session 1



Figure 4.
Participants cuts out brain hat during Session 1



Figure 2 .Participants observe EEG presentation in Session 2



Figure 3 . Participants gelatin brain model in Session 3

Discussion

Lack of representation of racial minorities and individuals from low socioeconomic background has been identified as an area of concern for the field of STEM. Studies suggest that a lack of early exposure to scientific demonstrations and activities contributes to the STEM achievement and representation gap (Sackes, Trundle, Bell, & O'Connell, 2011)

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