Opening:
Postdoctoral Research Associate in the Science Education Research Lab
Department of Kinesiology, School of Education, University of Wisconsin - Madison

Degree and area of specialization:
Ph.D. in biology education research, chemistry education research, physics education research, learning sciences or a related field, physiology, biology, chemistry, or physics.

Qualifications:
Highly motivated individuals with experience in **qualitative research methods** are invited to apply to join our **multi-institutional team** investigating **students' reasoning** in undergraduate physiology using **knowledge in pieces/resources theory**. Ideal candidates will:

- be highly motivated and independent
- be detail-oriented
- possess excellent interpersonal and collaboration skills
- have evidence of strong verbal and written communication skills
- possess problem-solving and organizational skills
- be intellectually curious with the ability to generate and test research questions
- have experience doing IRB/human subjects research studies
- have experience mentoring students in research
- have a strong publication record
- be proficient with common computer software used in qualitative data collection and analysis.

Research Description:
Three years of National Science Foundation funding is available for a postdoctoral scholar in the Science Education Research Lab led by Dr. Janet Branchaw in the Department of Kinesiology in the School of Education at the University of Wisconsin - Madison. This is an **in-person** (not remote) position.

This collaborative NSF funded project with Dr. Jennifer Doherty at Michigan State University will use interviews, focus groups, student work and in-class observations to investigate how students at three different institutions (University of Wisconsin-Madison, Michigan State University, and Waubansee Community College) learn to make sense of complex physiological problems.

Specifically, the research team will employ **microgenetic learning analysis** to adapt, revise and integrate **coordination class theory** and **metacognition theory** to develop a

new learning theory that describes: Aim 1. students' conceptual development of Flux and Mass Balance principle-based reasoning over-the-semester in introductory physiology courses; and Aim 2. the mechanisms of learning by which classroom practices framed by principles support the development of principle-based reasoning over-the-semester.

The postdoctoral scholar will be expected to collaboratively conduct research and write manuscripts with the inter-institutional research team, as well as **mentor undergraduate researchers** at the University of Wisconsin – Madison. The postdoctoral scholar will be encouraged to **identify, develop, and lead lines of research** in the project, and they will be empowered to **take these lines of research with them to their next position**.

NSF project summary:
https://www.nsf.gov/awardsearch/showAward?AWD_ID=2400798&HistoricalAwards=false

Professional Development:
In addition to gaining experience in conducting outstanding science education research, the postdoctoral scholar will be encouraged to explore numerous **career options** and work to find a **healthy work-life balance**. There are numerous professional training opportunities available at the University of Wisconsin-Madison through the UW-Madison Office of Postdoctoral Studies, the Wisconsin Institute for Science Education and Community Engagement, the Graduate School Professional Development Office, and the Center for Teaching, Learning and Mentoring.

Diversity is a source of strength for UW–Madison. Members of groups underrepresented in biology education research are encouraged to apply.

The salary range has been established by federal guidelines. You can review them at https://www.niaid.nih.gov/grants-contracts/salary-cap-stipends. The salary of the finalist(s) selected for this role will be set based on a variety of factors, including but not limited to internal equity, experience, education, specialty and training.

Start Date: January 2025 or when the position is filled.

How to Apply: Email Dr. Janet Branchaw at **branchaw@wisc.edu** with a current CV and a letter outlining your qualifications, interest in the position, and future career aspirations. Please provide contact information for at least two references.

Applications will be reviewed immediately and accepted until the position is filled.