Embodied Physics: STEM Learning for Underrepresented Youth

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How Does Each Learning Setting Give Students Access to Physics Through Dance?

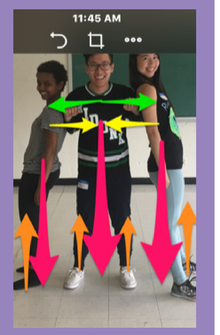
Community-Based Dance Centers

We are partnering with two urban community -based dance schools focused on Black and Latino dancers: OrigiNation in Jamaica Plain, MA and Roxbury Center for the Performing Arts in Roxbury, MA. Physics is inherent in their dance practices.

Embodied Learning Across 3 Settings

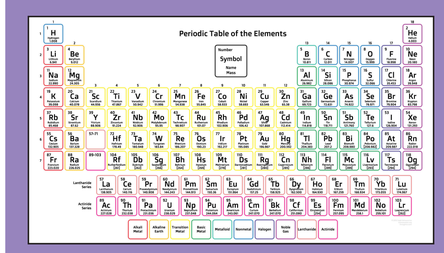
MIT/Pilot

Students from MIT (Massachusetts Institute of Technology, Cambridge MA) and the Boston Conservatory gathered at MIT for a 2 day workshop doing discrete Physics/Dance tasks with students as reflective thinking partners. Pictured here are the students Rolling on Balls (examining Newton's Laws), enacting transfer of hot/cold molecules and diagramming forces.



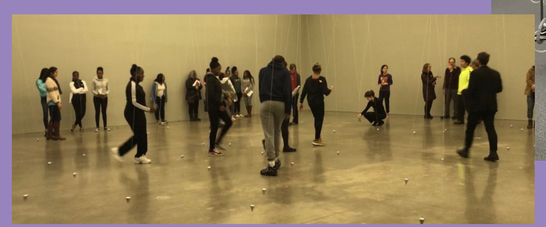
Our Learning Lab students participated in 8 three hour sessions:

- Day 1: Exploring gravity through teacher's choreography
- Day 2: Doing Jumps, Orbit Activity, Developing gravity choreography
- Day 3: Looking at Forces and Newton's laws through movement
- Day 4: Visiting Boston's Institute of Contemporary Art's Choreographic Objects Exhibition
- Day 5: Introducing Choreographic tools; Developing element dances
- Day 6: Gravity Dance; Modeling Activity
- Day 7: Using what you know about science to represent what you know through choreography
- Day 8: Sharing what we learned with friends, families and colleagues



Embodied Learning Lab

Participants in the Embodied Physics Learning Lab consist of 15 high school aged Black young women, drawn from the two cooperating community based dance studios: OrigiNations (MA) and Roxbury Center for the Performing Arts (MA). We met in a neutral space (a dance studio within a public school) where students explored Element Dances and Equal/Opposite Forces. These Learning Lab Participants also took a field trip to the Institute for Contemporary Arts in Boston, to visit the William Forsythe Choreographic Objects Exhibit. Many of the installations were interactive. Pictured here are the Rings and the Pendulum exhibits.



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