Cambridge Elements

Elements of Paleontology

BEYOND HANDS ON

Incorporating Kinesthetic Learning in an Undergraduate Paleontology Class

David W. Goldsmith
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Paleontological SOCIETY

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Abstract: Hands-on learning in paleontology, and geology in general, is fairly common practice. Students regularly use rocks, fossils, and data in the classroom throughout their undergraduate career, but they typically do it sitting in a chair in a lab. Kinesthetic learning is a teaching model that requires students to be physically active while learning. Students may be involved in a physical activity during class or might be using their own bodies to model some important concept. This Element briefly discusses the theory behind kinesthetic learning and how it fits into a student-centered, active learning classroom. It then describes in detail methods for incorporating kinesthetic learning into student exercises on biostratigraphy, assessment of sampling completeness, and modeling evolutionary processes. Assessment data demonstrate that these exercises have led to significantly improved student learning outcomes tied to these concepts.

Keywords: Learning Styles, Geoscience Education, Assessment

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