

Building Content Knowledge for Elementary Teachers of Science

The Building Content Knowledge for Elementary Teachers of Science (BuCKETS) project worked with Making Sense of Science to develop and implement physical science curriculum for undergraduate preservice elementary teachers. Students participated in a semester-long course designed to improve their content knowledge, attitudes and interests, and pedagogical content knowledge. Here we present a short summary of the results from the first year.

CONTENT KNOWLEDGE

16.3% INCREASE

Students in the treatment course scored significantly higher than the control group in:

- forces & motion
- energy
- waves
- overall content



ATTITUDES & INTERESTS

COMMITTED TO TEACHING SCIENCE

Most students are committed to and some even look forward to teaching science in their future classroom.

One student changed her major to physics education.



PEDAGOGICAL CONTENT KNOWLEDGE

INVESTIGATION & DISCOURSE



Students began to develop a better understanding of:

- the nature of learning science
- how students develop science ideas
- discourse strategies in science
- student-centered teaching strategies

THE UNIVERSITY OF MISSISSIPPI & MAKING SENSE OF SCIENCE

<https://cmse.olemiss.edu/buckets/>

<https://we-mss.weebly.com/>

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