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Epistemological effects of a problem solving approach in non-quantitative introductory science classes BRADLEY MCCOY, Azusa Pacific University — General studies science classes at many universities, such as physical science, earth science, or astronomy, stress memorization and repetition of concepts. This approach leaves students with little appreciation for how science is used to explain phenomena from general principles. We present a novel instructional technique for an earth science class in which the students are instructed in the use of a general problem solving strategy, adapted from well-known quantitative problem solving strategies, in order to train the students in how to apply physical principles. Using the Epistemological Beliefs Assessment for Physical Science, we have found that explicit training in problem solving significantly improves students' epistemology.

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