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Relevance First: How to Engage Preservice Elementary (K-8) Teacher Candidates in a Required Geoscience Course

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RELEVANCE FIRST! HOW TO ENGAGE PRESERVICE ELEMENTARY (K-8) TEACHER CANDIDATES IN A REQUIRED GEOSCIENCE COURSE

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The first day of each semester, many preservice elementary teacher candidates enter the science content classroom with a common refrain: I am not a science person; I'm no good at science! This poor self-efficacy may also be expressed by a sullen question, such as: why must we learn this “stuff” if we are planning to teach kindergarten? As educators, we can choose to ignore these defensive attitudes and press on with our content-focused curriculum, letting the chips (and undergrads) fall where they may. Conversely, we can take an approach that will both lead our students towards an understanding of the relevance of the content, as well as self-confidence in their ability to teach geoscience. In one of four required science content courses, Earth and Space Science for Elementary Teachers, we are achieving positive outcomes by redefining our students as our apprentices. This is accomplished by multiple approaches: (1) Transparent modeling of the teaching methods that students are learning about in their education courses, such as inquiry-based learning, standards-based learning, multiple forms of assessment, differentiated presentation for multiple learning styles, use of technology in instruction, etc.; (2) Labs that include activities which are easily adapted for the K-8 classroom; (3) Frequent surveys of background knowledge and pre/post-semester assessments that use questions derived directly from state tests for K-8 children; (4) Assignments that produce real resources to take to their future classrooms; (5) Opportunities to teach geoscience lessons through the NSTA student chapter's outreach group.

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