

## The value of teacher field trips and professional development workshops at VIII GeoSciEd, Campinas, Brazil

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Field trip experiences and education workshops focused toward classroom teachers from many countries will be held in conjunction with the VIII Geoscience Education Conference in Campinas, Brazil, in July 2018. Such teacher-centered activities are crucial to attracting pre-college educators to scientific conferences. Most classroom teachers do not have financial support to attend professional meetings, where often there are few technical sessions serving their interests. Consequently, teachers rarely receive the information and inspiration so desirable to equip them for exciting the next generation of geoscientists and developing scientifically-literate citizens. The attraction to attend an international conference is greatly enhanced through targeted opportunities that serve the needs of pre-college educators, especially where this is not common. During the week before VIII GeoSciEd, teachers from the US and elsewhere can participate in a five-day field trip in Minas Gerais. This State is famous for its gems and ores. The trip begins in Belo Horizonte (BH) with an introduction to Brazilian and local geology, followed by visits to the Rola Moça Park (Iron Quadrangle) overlooking the city. The next day teachers explore Mina de Passagem, a museum founded on a 19th century gold mine, Mariana and Ouro Preto, two colonial-era cities that were the center of the gold mining and other mineral operations. In the morning of Day 3, participants will have a custom tour of the new BH Museum of Minerals and Metals, then drive four hours to Diamantina. As the name indicates, this was a diamond-mining region in the colonial period. Visits to the unique geology in Biri-Biri State Park and the UFVJM (Federal University of the Valleys of Jequitinhonha and Mucuri) highlight Day 4. The final day, participants return to BH, making a stop en route at Gruta de Maquiné (Cave of Maquiné), then fly to Campinas. During the next two days, the Conference presents special teacher-focused workshops. Day 1 of these “GET2class – Geoscience Education for Teachers in the Classroom” programs focuses on Brazilian contributions to the International Ocean Discovery Program (IODP). Brazilian scientists and teachers who have served as education officers aboard the JOIDES Resolution drilling vessel will describe Brazilian participation, examples of significant discoveries made during IODP expeditions, and sample activities developed to teach with IODP educational activities. The second day of the GET2class workshops focuses on continents. “Geology and Geological Evolution of South America, Sedimentary Basins, and the Origin of modern Brazilian relief” will explain the geological evolution of South America and the origins of its topography. Special attention will be given to the effects of rain on rocks, weathering and the Carbon Cycle, and 3D models of sedimentary basins in Brazil. Teachers will work through selected teaching activities about plate tectonics and the rock cycle developed by the Earthlearningidea program. These professional development field trips and workshop experiences can serve as models for attracting pre-college teachers to other scientific conferences, especially in countries without such traditions.