

Partnering With Community to Bring Data to the Classroom

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Transferring modern research to practical classroom experiences can be a challenge and time consuming; and yet it is very important to the development of young scientists to have them interact with real world data and experience the process of science. UNAVCO has partnered with the Earth Exploration Toolbook (EET, a project of the National Science Digital Library Program) and the Science Education Resource Center at Carleton College to bring modern research in crustal deformation into the classroom and to support the use of data in the classroom to study plate tectonics. TERC education specialists teamed with data tool developers from UNAVCO to create the first chapter, “Creating Custom Map Images of Earth and Other Worlds” and are currently developing a new EET chapter entitled, “Analyzing Tectonic Plate Motion with GPS Data.” Creating Custom Map Images introduces educators and students to Jules Verne Voyager, a freely available online map tool that includes data for Earth as well as 19 other planets and moons. Users explore the range of

data that are available to create map images: 100 different types of data are available to characterize portions of Earth. Recent data for Jupiter, Saturn, and many of their moons are also available which allows students to apply comparative planetology techniques. The next EET chapter, Analyzing Tectonic Plate Motion with GPS Data, will provide step-by-step instructions to walk users through a case study in which they access UNAVCO GPS data and use analysis tools to explore crustal movement and deformation. In the course of completing a chapter, users produce and analyze GPS time-series plots and velocity vector maps. The ultimate goal of each EET chapter is to build user’s skills and confidence so they can use data to conduct their own investigations of the Earth system. UNAVCO professional development programs for teachers are profiled in the SERC resources aimed at helping geoscience faculty better prepare teachers to teach Earth Science.