



## Caltech Brings Science to Local Elementary School

December 15, 2009



Earlier this month, Caltech's Tectonics Observatory participated in Hamilton Elementary School's second annual Family SMARt (Science, Math, and Art) Night. The event drew over 100 students in pre-K through sixth grade and their families. The Tectonics Observatory contributed four hands-on science activities.

Graduate students Nina Lin (pictured) and Yu Wang led students through a series of interactive games involving the rock cycle. "Wow! There is also glass in the volcanoes?" asked one student. "You say these rocks were formed 12 to 18 miles under my feet? How do they float up?" asked another. By observing the color, roughness, and sparkling crystals of samples of igneous, metamorphic, and sedimentary rocks, the students learned some simple tricks for separating rocks into these three major categories.

Through a series of interactive puzzles, graduate student Steve Skinner illustrated the scientific evidence that led to the theory of plate tectonics. He showed animations of the motion of Earth's plates over the last 700 million years, with the continents coming together to form the

supercontinent Pangaea and then separating to where they are today. He showed how they continue to move, with North America heading toward Japan, and Australia heading toward Asia.

Using an "earthquake machine," the Tectonics Observatory's outreach program manager Laurie Kovalenko demonstrated the motion of our home tectonic plate, the Pacific Plate, and discussed how earthquakes occur. "You mean this school is moving toward San Francisco?" asked one student.

And Jean-Philippe Avouac, the director of the Tectonics Observatory, brought rock samples from the top of Mount Everest that contain fossils of sea life for his presentation on how mountains grow.