

# Creek View Fifth Graders “Shake” Up the Science Adventure Zone!



Creek View Fifth Graders made another visit to the Science Adventure Zone this week. Students visited the lab for some hands-on experiments about constructive and

destructive processes, the forces that shape the surface of the earth. In support of their classroom science curriculum, the students rotated through four centers to learn more about earthquakes, volcanoes, wind erosion and water erosion..

**Earthquake Simulation:** An earthquake is caused by movement of the tectonic plates beneath the earth's surface. As the plates move, they put forces on



themselves and each other, which eventually will cause the earth's crust to break. The energy is released in the form of waves; this is an earthquake. In this center, students simulated their own earthquakes using two pieces of cardboard to act as tectonic

plates. They covered the pieces with soil to represent the earth's crust. By pushing the cardboard pieces together, pulling them apart and sliding them against each other, students were able to see first hand what happens on the earth's surface when earthquakes occur.

**Volcanic Mentos:** What do you get when you combine a package of mentos candy, a two liter bottle of diet cola and an unsuspecting parent

volunteer? A volcano! (And the excited cheers of students as they watch the soda plume high up into the air!)

This activity is always a crowd pleaser. But it also demonstrates how pressure that builds beneath the earth's surface in areas called 'magma chambers' will sometimes break through a vent. This allows the gas under



pressure (and molten rock) to escape to the surface. The result is a volcano, an example of one of the most violent constructive processes on earth.

**The Forces of Erosion, Part I: Water Erosion.** Erosion is the wearing away of soil and land. Water, ice and wind constantly flow across the surface of the earth, causing continual changes to its shape. In this first center, students studied the force of water erosion. Using a water trough filled with sand, students created their own river bed. They lined one side of the river bed with trees, shrubs and rocks (small clippings from bushes and small

stones), and then allowed water to flow down their 'river' and out into a sink. They observed the differences in



erosion forces on the bank of the river protected by stones and trees compared to the side of the river that was unprotected. They also observed the path of the debris, and how it collected at the end of our simulated river, very

much the way a delta forms at the mouth of a river.

**The Forces of Erosion, Part II: Wind Erosion.** In our fourth center, students took a look at another at erosion, this time caused by wind. They created their own dune environment, simulating the protective dune lines on our beaches and barrier islands. In the light of the recent hurricanes, this activity was especially meaningful for the students. Through



several activities, they were able to demonstrate the effect of wind (using a hair dryer) on the sand dunes. They observed how dunes 'anchored' with plants, fences and rocks are better able to resist the effects of the wind. The experiment also demonstrated how important these dunes and barrier formations are to protecting inland areas.

**A big thank you to all the parents** who volunteered their time to assist our students during this visit! In addition to our lab coordinator, every lab requires at least four parents as Science Lab Assistants. It is only through their time and dedication that our students get to experience exciting science in action!

**A very special thank you to our Fifth Grade Lab Co-Coordinator, Cindi Maxwell!** Cindi made our exploration of constructive and destructive processes a truly earth-moving experience!!

**The Science Adventure Zone** is always in need of volunteers interested in helping our students 'do science!' If you are interested in helping out with this valuable contribution to our students' science curriculum, please contact Karen Ross Foreman at [Karen@kwross.com](mailto:Karen@kwross.com), Committee Chair.