



Bienestar

Building housing, hope and futures

All Kids are Scientists- A.K.A. Science

April 15, 2011- June 3, 2011

Elm Park Outcome Report

Bienestar purchased an A.K.A Science Natural Disasters curriculum through Oregon Health Career Center's A.K.A. Science Program. We received a box filled with experiments all about different natural disasters for students from second to fourth grade. A.K.A Science Club was held in the Community Room of Elm Park, 2351 Elm St, Forest Grove, OR. A.K.A Science Club ran for six weeks on Friday afternoons from 4:00-5:00 p.m. beginning April 15, 2011 and ending June 3, 2011 with six registered students from Elm Park I and Elm Park II. The class was taught by Program Coordinator, Elena Barreto and Youth Program Coordinator Javier Urenda.

During class students partook in a variety of experiments that helped them learn about different natural disasters, why they occur, and the effects of such disasters. Among these they learned about flooding, thunderstorms, tornadoes, earthquakes, and volcanoes. Each week the students would arrive, open their "Weather Watchers booklets" to observe the weather to see how it was changing from week to week or staying the same. They paid close attention to the temperature, wind, rain, sun, and clouds. The students learned how to use a thermometer to determine the temperature in Celsius and Fahrenheit; they made weather vanes to determine the direction of the wind, and learned the cardinal directions. In addition, students learned about air pressure and the necessity of air pressure to fly.



Erupting Volcanoes

Students experimented with different types of soil to understand absorption and saturation and the importance of trees near streams to help with infiltration and prevent flooding. While learning about thunderstorms, students experimented with balloons and a variety of objects to understand static electricity as well as how to count the seconds to determine the distance of the lightning. Students made their own tornadoes in vials to understand how vortexes work and what they look like. They also made their own neighborhood with houses made of different materials (cards, sticks, play dough) to determine which ones would hold up best against a tornado (a spinning top). Students learned about the earth's layers and plates to understand why earthquakes occur, and experimented with Jell-O and play dough to understand how the earth's crust moves and changes the earth's geography. Finally, students were able to make their own volcano to learn about the importance of pressure and earth's movement. They also received samples of volcanic rock: pumice, basalt, and obsidian, to explore their properties.

Attendance

Six children registered for A.K.A Science, from Elm Park I and Elm Park II. Two were in second grade, two in third grade, and two in fourth grade. On average five students attended each week.

Outcome (see analysis on website for specific results)

Students entered the class with some knowledge of natural disasters. All students had heard of the natural disasters we explored, but did not know what some of them were or why they occur. All students had learned about earthquakes and what to do in case of an earthquake at school, but few had learned why it occurs. The older students had learned about volcanoes but this was new material for the younger students. Through explanations, experimentation, and activities the students now have a better understanding of what these natural disasters are, how they start, why they happen, and the consequences of these on the areas they strike.



Through the pre-assessment and post assessment we discovered that more students ended the class believing science was fun, believing they could perform experiments and learn about scientific ideas, and that A.K.A Science Club could help them in school. The students improved on all of the questions on the assessment except for one. They improved dramatically on “How can you figure out how far away lightning is?” Only one student got it right in the pre-assessment and all six of the students got it right in the post-assessment. The students had excellent attendance and usually arrived early, interested, and excited about the day’s activities.



Final class 6/3/2011

Respectfully Submitted,

Elena Barreto and Javier Urenda
Program Coordinators

A.K.A. Science Test Results
Elm Park: 2nd-4th

Question	Pre-test				Post-test				
Favorite subject	Math 4	Reading 1	Writing 1		Favorite subject	Math 4	Reading 2		
	Yes	Sort of	No			Yes	Sort of	No	
I like School	4	2	0		I like School	3	1	2	
I can do science	4	1	1		I can do science	6	0	0	
Science is fun	5	1	0		Science is fun	6	0	0	
A.K.A. Science can help me with school	3	3	0		A.K.A. Science can help me with school	6	0	0	
	Mountains	Buildings	Leaves	Pin-wheel		Mountains	Buildings	Leaves	Pin-wheel
What can wind move?	0	0	6*	6*	What can wind move?	1		5*	6*
What causes volcanoes to erupt?	Pressure 5*	Vinegar 0	Rocks 1		What causes volcanoes to erupt?	Pressure 6*	Vinegar 0	Rocks 0	
How can you figure out how far away lighting is?	Count the seconds between lighting and thunder 1*	Measure the distance between 2 different lighting strikes 0	You can only tell with scientific equipment 5		How can you figure out how far away lighting is?	Count the seconds between lighting and thunder 6*	Measure the distance between 2 different lighting strikes 0	You can only tell with scientific equipment 0	

*Correct answer