**Student:** Zulma (Yocelyn) Reza

**Course Title:** 7th Grade Science, Family 1

**Teacher:** Aaron Dobie

**Class Description**:

In 7th grade science this summer we focused on the study of biology, the subject Denver Public School students study in the seventh grade. Under the umbrella of biology we began the summer with photosynthesis – the process by which plants make their own food out of water, carbon dioxide and sun energy. We then studied food chains, food webs and how energy is transferred between different trophic levels – producer, primary consumer, secondary consumer, tertiary consumer – of the food chain. In addition to photosynthesis and food chains we learned some “how to” skills such as identifying experiments’ independent and dependent variables, graphing experimental data and labeling graphs’ x axes, y axes and titles. Students got to record and graph their own data in experiments such as “Does a person’s head size affect their 40 yard dash time?” During the last week we synthesized all of the summer’s ideas into the “Solar Oven Experiment” where students created their own solar oven out of a pizza box, aluminum foil, saran wrap and tape in order to harness the sun’s power and cook pizzas and s’mores. The ovens got as hot as 180°F. In addition to cooking food we tested whether black ovens worked better than white ovens. Students kept track of their ovens’ internal temperatures and graphed the black ovens’ temperatures side by side to the white ovens’ temperatures to decide which colored oven was more effective. The black ovens worked better. Students had to complete a final packet for the “Solar Oven Experiment” and show an understanding of all parts of the scientific method – asking a question, making a hypothesis, writing experimental procedures, gathering materials, recording data, graphing the data and interpreting their graphs in a paragraph-style conclusion.

**Academic Performance**:

Yocelyn was great to have in science class because of her curious mind: she is naturally inqusitive and asks many good questions. She had a nearly perfect homework record although sometimes the homework was incomplete or appeared to have been completed in a rushed manner. The one piece of advice that I give all middle school students is to do their homework because it is good to establish good habits early on; homework is very important in high school.

Yocelyn had a good score on the Photosynthesis Test we took at the end of the 3rd week although I believe she could have improved her score is she had spent more time studying the night before. Just 30 more minutes spent studying the minor details could have transformed her good grade to an excellent grade. As a class we took a science pre-test on the third day of school and took the same test again during the last week to gauge student improvement. Yocelyn showed improvements in her ability to graph data, predict the behavior of exponential graphs, and her understandings of the inputs and outputs of photosynthesis. It was exciting to see her knowledge of biology grow this summer.

Another area that Yocelyn could improve in is her focus in class. I recall a few different times during our 6 weeks together when instead of finishing an assignment in class (so that she wouldn’t have homework) she elected to talk with friends and not do the work. The advantage of effectively using her class time extends beyond having no homework – she would have had the opportunity to ask me for help with the work and get a better grade on the assignment. Apart from this habit Yocelyn’s behavior was excellent for the 6 week period. She is respectful of her peers and respectful towards adults.

I hope that Yocelyn chooses to come back to Breakthrough next summer and that she takes the most challenging classes her middle school has to offer: she is an extremely intelligent and capable young woman. Tell her to keep challenging herself and to keep cooking with her solar oven because the winter months are fast approaching!