**Student:** Manuel Arebalo Jr.

**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**:

Manuel was a pleasure to teach this summer. Smart and funny, he added an intelligent, humorous flavor to science class. While a little more effort could have been put into his nightly homework assignments he always seemed up-to-date on the material we were covering in class as proven by his excellent grade on the Photosynthesis Unit Test at the end of the 3rd week. Manuel really showed improvement this summer in his ability to graph data and identify independent and dependent variables.

As Manuel goes forward in middle and high school I encourage him to take the most challenging classes possible. Manuel seemed to get bored in class when he was not challenged and I think that hard classes will make him a better student and introduce him to a peer group that is as smart as he is. I also encourage him to participate more in class by raising his hand to answer questions and to ask questions of his own.

Manuel was generally well behaved in class with a few slip-ups here and there. He was popular among his classmates and made many friends over the course of the summer. There were a few incidents involving bad language when I had to speak with him one-on-one but the language seemed more like an attempt to impress his peers than it did a habit. I also encourage Manuel to not be negatively influenced by his peers – a few times when around other misbehaving boys he misbehaved more. I encourage him to think for himself and make decisions based on what he wants to do and not what others want to do.

Overall Manuel had a great summer in science class and really seemed to enjoy himself. I look forward to seeing him get off the bus on the first morning of Breakthrough next summer.