**Student:** Israa Hussein

**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**:

I could not have asked for a more spirited and excited student than Israa this summer in science class. Always the first to raise her hand she demonstrated again and again that she was hungry for a good education. There is nothing better to see in a student than the desire to learn and Israa definitely has this desire.

Israa consistently turned her homework in every morning at breakfast. One thing she could work on is calling her teachers for help with homework. Sometimes the homework she turned in was partially complete or she hadn’t directly followed the homework’s directions. While I do not know if Israa is allowed to call her teachers during the school year I would suggest that Israa take advantage of this opportunity at Breakthrough next summer (and we really hope that she comes back!)

We took 3 tests during the summer. The 1st and 3rd tests were actually the same test but taken on the first week of class and the last week to gauge the students’ improvements. The 2nd test was on Photosynthesis and identifying independent and dependent variables. Israa showed improvement between the 1st and the 3rd test which was exciting to see and she did reasonably well on the 2nd test. One area Israa (and all students) can improve in is her study skills. First of all, I suggest that she gets in the habit of taking notes everyday in class in one single notebook designated for that class (in my case, science class.) This way, when Israa studies for a test all of her study materials can be found in the same place. Secondly, I suggest that she spends a little more time studying on the nights before tests. Even just 20 minutes studying before the Photosynthesis Test could have taken her grade from okay to good.

Israa really enjoyed the hands-on projects we did in class such as coloring photosynthesis diagrams, making models of comets and creating her solar oven. While she definitely enjoyed herself, all of these activities were done in group settings and Israa was sometimes abrasive with her peers. Another area for Israa’s continued improvement as a student is for her to learn to listen to others’ ideas and to think before sharing her thoughts. Although her comments were always well-intentioned other students understood them as interruptions rather than the thoughtful statements they were.

Israa was a pleasure to teach this summer and I hope that she keeps working hard in school. Her language skills are incredible given the fact that she has been speaking English for less than 2 years. I wish her the best of luck in the future.