

Teacher: Nancy Anderson Griner (formerly Nancy Anderson)

School: Emerald Coast Middle School

Grade: 7th Grade

Subject: Advanced Science

of students impacted: 140

2017-2018 ACCEL Grant Project Summary: “Extracting Human DNA”

Funds for this grant were used to purchase lab supplies giving students a hands-on science activity so they could see their own DNA. I purchased lab kits from Carolina Biological Supply. The concept of DNA is difficult for 7th grade students to grasp due to the nature of the content. They have all seen the model of a double helix, but actually getting to see their own DNA was “pretty cool” according to my 12 and 13 year old students.

Students were divided in lab groups of approximately 4-5 students. Students began the lab by collecting cheek cell samples by swishing their mouth around with Gatorade. When mixed with a lysate and ethanol alcohol they watched their DNA precipitate out of the solution. The students then transferred their own DNA to microcentrifuge tubes and made their DNA into a necklace.

Overall, the lab was extremely successful. This hour long activity provided a connection that could not have been made without this hands-on activity. In addition to completing the lab, the students answered a series of reflection questions. This was by far, my student’s favorite activity all year long. Unfortunately, I have been told by my district that we can no longer do science labs that involve students collecting their own cheek cells. It is unfortunate because this was one of those activities that were not only engaging, but that also connected real-life science to the standards.

