Hi my name is Malida. The goal of my presentation was to create a sketch that explores quadratic equations in real life situations. More specifically, I wanted to look at what happens to the parabola when b and c changes. I used a context problem, where a dolphin jumps out of the water, and the students need it to calculate the time that the dolphin is in the air. The basic sketch works like this: there is a parabolic function relating height and time, with a fixed value for a, being gravity. Additionally, the b and c values in the quadratic function are equated to the velocity and initial height, respectively. This sketch works because it demonstrates that the only independent variable is t. Additionally, this sketch works as it shows that the function only applies toward the height, where most students would imagine that the function is depicting the entire movement of the dolphin to be a parabolic function. Based on mathematical practice 5, I plotted and traced a point, with time as an independent variable and the height as the dependent. I also included sliders that allowed the student to change velocity, initial height and time so that they can see how b, c and t change the graph, more specifically, how b and c change the graph and that t is the independent variable. Two other standards that I used when creating this sketch were math practice 1, making sense of the problem and to persevere in solving because by being able to take a complicated problem, identify the knowns and unknowns and make a function is actually very difficult for students just learning how to approach word problems. Apart from that, this allows students to visualize the actual movement and be able to apply the visualizations to other word problems in the future. I also used mathematical practice 8, that allows for students to view patterns, where the students are able to see how the parabola changes as the function changes. The thing I liked the best about my project is that I was able to have fun doing it, and allow the problem, that can seem very complex look more simplified as it is laid out visually.