Algebra One Name:
"Fireworks" Unit Assessment Date:
Period:

Remember the story about the school who was putting on a fireworks show for their state winning soccer team? Well, as you know our girl's varsity basketball team won their first state championship this year and we also would like to have a fireworks show. Mr. Caudill doesn't know how to design the fireworks display so that it is both safe and efficient. Lucky for Mr. Caudill, you are now an expert in creating fireworks displays. Your task is to convince him of the safety of a fireworks display in our stadium based on how high in the air the fireworks will explode and where the rocket will hit the ground. You will need to design a quadratic equation so that the fireworks display can occur effectively and safely. Then you will prepare a written proposal in which you include a diagram of the path of the trajectory labeling where the fireworks will explode and where the rocket hits the ground. Your proposal should include mathematical support that shows who your quadratic equation is the most effective for visual effects and safety. In addition, you need to describe and analyze how a change in any of the terms in your quadratic equation could cause change in your overall presentation.