

<p style="text-align: center;">Project Title Name, School City, State</p>		<p style="text-align: center;">Project ID#</p>
<p>Q1: Research Question/Engineering Goal Which masks if any of the masks that I have at my house protect you most of the time from others air, or respiratory droplets?</p>	<p>Q3: Data Analysis & Results In test number one which was seeing if I could blow out the candle the neck gaiter, bandanna, and the home made T-shirt mask had similar results. All three of these masks allowed me to make the candle flicker which is not good. The flamingo mask with no filter flickered but did not go out which is an okay result. The blue surgical mask, N-95 mask, and the purple and blue mask with filter had similar results too. With these masks on I was unable to make the candle flicker or go out, which is a great result. In test number two which I tested to see if any water would come through the homemade T-shirt mask, flamingo mask with no filter, and the blue purple mask with filter didn't allow water to come through, but it absorbed it. Neck gaiter allowed almost 100% of the water to come through the mask. The blue surgical mask deflected the water to the inside, which is not necessarily a good thing meaning that you were then inhaling your own germs back in again. In the bandanna the water was partially absorbed and part of it came through the mask. The N-95 mask was the only mask that did not allow any water to come through.</p>	
<p>Q2: Methodology/Project Design Gather all of your masks, candles, matches or lighter, water, spray bottle, and construction paper together at a table. Set the water bottle, water, and construction paper off to the side. Take your matches or lighter and light your candle, it is important that you are in an area with no breeze. Put on your first mask and blow an even slow breathe, try this with each mask on. Document the data. You can now put away your candle, and matches or lighter. Now fill your water bottle all the way full. Next you will need to setup your pieces of construction paper. Place one piece of construction paper standing up vertically in-front of the mask about 6 inches away. Lay another piece of paper on the table underneath the mask. Then holding the mask out like it is over your face, spray the water bottle at the center of the mask to symbolize sneezing. Try this with each of your masks. Record whether any water came through the mask or not.</p>	<p>Q4: Interpretation & Conclusions The hypothesis for this project was supported. The hypothesis stated that when the N95 mask was compared to other types of masks, it would protect others from human respiratory droplets the best because N95 masks are used by medical professionals, carpenters, and painters all over the world to protect from small germs and particles. The data shows the N-95 mask was the only mask that did not allow the candle to be blown out, as well as allowing no water through the mask. Something important to remember when doing the project is to keep the distances from the candle and construction paper the same for each test to insure a smaller margin of error. People must understand the results of this project to make better choices when selecting the right mask for the situation.</p>	

