How Effective Are Face Masks?

Vachal, Lindsey (School: Tioga High School)

The purpose of this experiment was to see how effective masks different masks are. I also wanted to see how effective they were to slow the spread of bacteria from a person's breath. Gather materials. Without any type of mask on, talk towards an agar plate at a speaking distance away. Seal plate with parafilm. Without any type of mask on, cough towards an agar plate at a speaking distance away. Seal plate with parafilm. Repeat the same procedures with a cloth mask. Repeat again, with a surgical mask on. Place in an incubator for 4-6 days. Observe colony growth on agar plates. In my experiment, I found that there was some growth on the plates that were used without the masks. On the plate that I talked on with a cloth mask on, there was no growth. On the plate that I coughed on with a cloth mask on, there was more growth than I had expected. There were no big colonies, but the plate became cloudy. There was no growth on either of the plates that were used with the surgical mask. I concluded that a surgical mask works better than a cloth mask to prevent the spread of bacteria and viruses on someone's breath.