



Unit 3 Capstone Project
by Allison Example

Day 1- Control The Outbreak

Attention all citizens of Marshfield,

There has been an outrageous outbreak of an unknown disease in Marshfield. This disease has been found in 1-2% of the population and it is spreading rapidly. What we know right now about the disease is that it is very deadly and it passes from person to person very quickly. We have called the Center for Disease Control(CDC) and they are working on creating a vaccine to cure this disease. As of now, we enforce everyone to stay in your houses and make no contact with anyone outside of your house. Town trucks will come by and drop off a 1- week supply of food for you and your family. We will also drop some packages of water at your doorstep. We have sent in a test of the town water to the CDC for them to use as a test to see if the disease is running in the water. We demand that you do not use your faucet water to drink from. All grocery stores, shops, and other public buildings are closed until further notice. We recommend you all to wear the masks that will also be included in the package that we drop off at your house. School and jobs are cancelled for now until we figure out a way to control this outbreak. Follow this information until further notice. Stay safe!

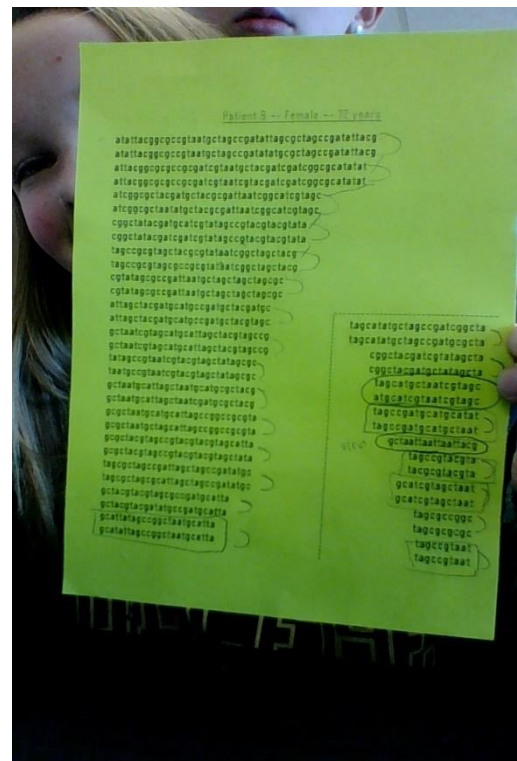
Sincerely,

Your town of Marshfield

Day 2- Test Infected Patients

Materials

- 1 blood sample
- 1 test tube + test tube rack
- 1 rubber stopper
- 1 beaker with laundry detergent and pipette
- 1 beaker or rubbing alcohol and pipette
- Enzyme + green spoon



The lonely DNA code in patient 13's
code is "GCTTATTATTATTACG"

The lonely DNA code in patient 6's
code is "GCTTATTTATTATTACG"

We believe this is the code of the virus!

Day 4- Analyze Reproduction

We have now discovered that this disease is in fact a virus. We sampled many people's blood tests and we have found the un paired DNA codes match in everyone's code. We are now working on producing a vaccine to prevent the uncontaminated people from getting this virus. We also found out that the virus is not mutating so that is the good news. We can make one vaccine to prevent the whole virus. We want everyone to stay at their homes and more food and water will be getting dropped off at your doorstep. You are now allowed to use the sink water because we confirmed that the virus is not coming from the water. We will update you as soon as we know more about this outbreak!

Sincerely ,

Your town of Marshfield

Day 5- Produce a Vaccine

Materials

- Formaldehyde
- Human tissue with the virus
- Flask
- Pipette
- Water
- Cups
- Syringe
- Funnel

Procedure

1. Strain the human tissue using filter paper, a funnel, and a flask
2. Pour 10 ml of water over the human tissue and let all of the water strain through filter paper
3. Soak up 10 ml of formaldehyde in the pipette and squirt it into the tissue water in the flask
4. The formaldehyde will freeze the virus allowing it to not be able to reproduce but it will also keep the shape so that the T-Cells will recognize is a prevent it from getting into your bloodstream
5. Soak up the vaccine in a syringe and inject it into the uncontaminated people
6. This vaccine will not cure the disease but it will prevent the people that are uncontaminated from getting the disease

