



HEALTH & FITNESS

How Far Will That Germ Travel?

In this experiment you will replicate the droplet that may contain a virus or other germ, that you expel as you talk, sing or yell. You will measure how far each of these might travel and see the spread of the splatters.

MATERIALS:

- 3 spray bottles of different sizes
- Food coloring
- Water to fill bottles
- Piece of paper or paper towel
- Measuring tape (up to 6')
- PPE for person holding paper
 - Poncho
 - Safety glasses or goggles
- PPE for person conducting experiment
 - Remember if you are sharing spray bottles and tape to wear gloves. Spray them with disinfectant once you are done.

PROCEDURE:

1. Fill your spray bottle with water.
2. Drop a couple of drops of food coloring (different for each) into each bottle.
3. Have your assistant put on their PPE.
4. From one starting point measure and mark three distances: 1 foot, 3 feet and 6 feet
5. Have your assistant sit in a chair or stand at the starting line.
6. Give them the piece of paper/towel to hold up as a target.
7. If you have 3 spray bottles of different sizes designate them as follows:
 - a. Smallest bottle – talking
 - b. Medium bottle – singing
 - c. Largest bottle - yelling
8. Stand at the 6-foot mark and spray using the smallest bottle to represent the droplets which leave your mouth when you are talking – aim at the paper that is being held by your assistant.
9. Stand at the 3-foot mark and spray using the same bottle.
10. Finally stand at the 1-foot mark and spray with the previously used bottle.

11. Repeat for the medium size spray bottle.
12. Repeat for the large size spray bottle.
13. You can change the piece of paper for each bottle and distance then compare the amount of splatter for each bottle at each distance.

What do you think about physical distancing from others now?