

DISEASE TRANSMISSION DEMO

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Teacher Prep:

Prepare as many test tubes as you have students in your class.

In one test tube place 2 ml of ammonia in 18 ml of water. If the dilution is correct, the odor should be indistinguishable.

Place 20ml of water in all of the other test tubes.

Students:

Tell your class that you will be showing them how disease spreads from one victim to another. The test tubes represent their bodily fluids (saliva, blood, urine, sweat, etc.)

Give each student a clean, unused pipette. Demonstrate how they will use the pipette – they should squeeze the bulb. Keeping it pinched, they should lower it below the surface of the liquid. When they let go of the pinch, the liquid should be drawn up into the pipette.

Have each student select one of the test tubes. Make a mental note of who picked up the test tube with ammonia.

Every time you signal the class, the students should approach another different student.

Simultaneously, each student should take several drops from his/her own test tube and slowly drop the liquid into the test tube of the other student. **Students should be careful not to put the pipette into the other person's liquid (that would be assimilating an injection not a transferal).**

With a small class you may only be able to perform two transfers. Larger classes can do several transfers.

Have the students sit down. Take your container of phenylphthalien and tell them it is a secret chemical used in labs to detect the presence of virus particles. You may name a disease – AIDS always gets their attention.

Approach each student, one at a time, and drop several drops of phenylphthalien in. **DO NOT PUT YOUR PIPETTE INTO THEIR LIQUID.** – you will contaminate your pipette and that will ruin the results. If the solution in the test tube remains clear the student is not affected with the disease. If it turns pink – the student has the disease.

Let the class determine who the initial host was and see if the students can determine who gave the disease to each of the subsequent victims.

Use this simulation to discuss how viruses are spread at home, at school, in the workplace, in restaurants, malls, etc. Write students' responses on the board.