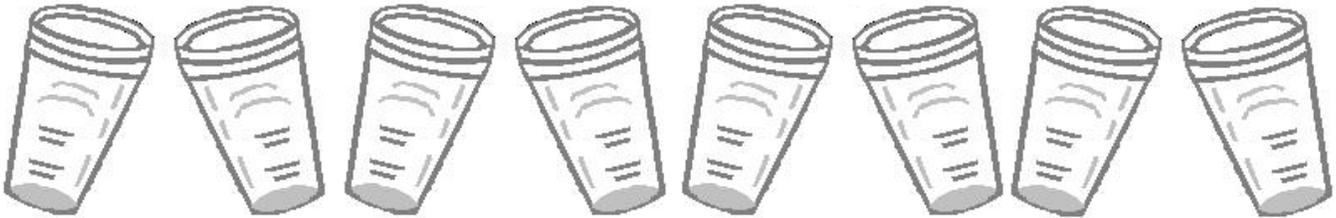


Pinkeye/Infection Spread Demonstration

MATERIALS: Small, inexpensive clear cups, baking soda, distilled white (clear) vinegar, water, small spoon.

You will need **at least** eight (8) students, but you can do this with a larger group, even the whole class.



PREPARATION:

1. Have a clear cup for each student.
2. Secretly, fill all cups **except one(!)** with approximately one ounce of water.
3. **Secretly** fill the remaining 1 cup with approximately one ounce of white vinegar. Mark this cup discretely with a small "X" or otherwise **secretly** keep track of who you give it to.
4. Place baking soda in a bowl or container with easy access to your small spoon.

DIRECTIONS:

1. Explain to the students:
 - a. "Pinkeye or **conjunctivitis** is a disease you get in your eye. The conjunctiva is the clear membrane that covers the white part of your eyes, and the lining of your eyelid. There are several causes behind inflammation of this membrane: viral, bacterial, allergic, and foreign objects on the eye—most often contact lenses! Pinkeye can cause excessive eye watering, greenish discharge, and redness of the affected eye.
 - b. Both viral and bacterial conjunctivitis are highly **contagious**, that means that it can be easily spread from one person to another. For example, you could be rubbing your eyes and then shaking hands with someone; or sharing a washcloth, towel, or pillowcase with someone; or letting someone try on your sunglasses, or sneezing and forgetting to wash your hands afterward; or rubbing your eyes, and then handing your friend a pencil; or sharing eye make-up. We are going to do an experiment that demonstrates how pinkeye is spread."
2. Choose (at least 8) students to volunteer for the demonstration.

3. Have students choose a cup. DO NOT TELL THEM THAT ONE HAS VINEGAR AND THE OTHERS WATER!!!!!!!!!!!! (The student with the vinegar is the person with pretend pinkeye.) This might be a good time to remind them not to sniff or drink unknown fluids people give them!
4. Instruct the students:
 - a. “Everyone needs to carefully hold one cup of simulated tears. We aren’t using real microbes, and the chemicals we are using aren’t dangerous, but we don’t want to make a mess. When I tell you to, you are going to choose one person to mix your “tears” with...I want you to CAREFULLY pour your liquid into a partner’s cup, and then let them pour half of it back into your cup, so you both have about the same amount you started with.
 - b. We’ll do this a couple of times, and then test everyone for contamination. Try to end up with about the same amount of liquid as when you started. When we exchange fluids like this, it represents different ways you accidentally spread pinkeye germs to other people.”
5. Have the students “share tears” with a partner. Once they have completed sharing, they all find a new partner – encourage them to find someone they weren’t already standing near. After sharing, repeat a third time. If you have a large group (over 20) repeat with a 4th partner.
6. Line up the students and put a pinch (1/4 – 1/2 teaspoon) of baking soda in each of their cups. They can swirl the liquid around gently to mix it up. The liquid will either do nothing, or fizz.
7. The cups that make bubbles/fizz have pinkeye. (The vinegar and baking soda react with each other.) You may want to separate the large group into two smaller groups in different parts of the room: those who are INFECTED (bubbled) or SAFE (the liquid didn’t change).
8. You can then find the “initial infected person” by locating the cup with the small “X” on it. Do this with as much drama as you wish!! Look how many people were infected from just one person’s germs.
9. Reiterate:
 - a. “See how easily Pinkeye can be spread? That’s why schools sometimes send home letters warning parents that a Pinkeye infection is happening at school, so everyone knows to be extra careful.
 - b. Washing your hands often is the best way to reduce the spread of infections from Pinkeye, as well as colds & the flu.