

Activity One – How Did I Get Sick?

Taken from the State Science Teacher Resource Book page 12.2.31

Instructional Procedure

1. Invite a volunteer to take a drink from either of two glasses of water. Tell him/her you spit into one glass before class. (optional) Discuss the response and reasons why we don't drink water we think is contaminated.
2. Continue the exploration by indicating that the class is going to play a "kissing game." Distribute the pre-prepared glasses of liquid to each member of the class. Prior to class time, add 1/8 teaspoon of sodium hydroxide to two of the glasses of water. *CAUTION; Warn students not to taste any of the samples.* Each student should have a glass of liquid. Indicate that you are going to exchange water from the cups ("kiss"). The procedure is to allow someone to pour some water from their glass into yours. For each amount added, each individual must pour this amount into another person's glass. Continue this exchange for three minutes.
3. After the water exchange, indicate that two of the cups contained germs (a chemical, ammonia or sodium hydroxide). As with most microorganisms, it is not easily seen but can be detected with a chemical. Speculate on how far you think the germ was spread during the three minutes.
4. Add a few drops of phenolphthalein to each glass. If the germ (ammonia or sodium hydroxide) is present, the water will change color. Those with colored water will have been infected. Discuss the results.

Materials

- Cups of water (one per student)
- Sodium hydroxide solution or liquid ammonia cleaner
- Phenolphthalein
- Eye dropper