



## Virus Travel Simulation II

**Objective:** Students will understand how viruses can infect a large population by simulating viral transmission. The identity of the originally infected person will be found by analyzing data collected during the simulation.

**Materials:** phenolphthalein      1 test tube per student  
.01 M NaOH                              safety goggles  
1 test tube rack per group of 4 students  
1 plastic transfer pipette  
virus travel student worksheet

**Procedure:**

1. **Put on safety goggles.** Select a test tube and write down the number of your test tube on your data sheet.
2. Find another student in the class and write his/her test tube number on your worksheet under exchange partner #1.
3. Exchange fluids with this person by completing the following:
  - Each person should fill his/her pipette with fluid from his/her test tube.
  - Simultaneously release this fluid into your partner's test tube.
  - Write the test tube number of the person with whom you exchanged fluids on the overhead next to your number.
4. Once the entire class has completed the first exchange, repeat steps 2-3 for exchange #2.
5. Once the entire class has completed the first exchange, repeat steps 2-3 for exchange #3.
6. Once the entire class has completed the first exchange, repeat steps 2-3 for exchange #4.
7. Place 1 drop of phenolphthalein in your test tube.
8. Record your observations on your worksheet.
9. If you observed a pink color change, circle your number on the overhead data sheet representing an infected person.
10. On your Class Exchange Data Sheet, copy the numbers of the circled, infected students and their exchanges.
11. Using the class data, determine the original number of the person who came to the party carrying the virus and transmitted it to other students. (HINT: Eliminate all infected students that exchanged with a student that is not infected since they cannot be the original carrier.)

# Virus Travel

Name: \_\_\_\_\_

Period: \_\_\_\_\_

Exchange #1: test tube # \_\_\_\_\_

Exchange #2: test tube # \_\_\_\_\_

Exchange #3: test tube # \_\_\_\_\_

Exchange #4: test tube # \_\_\_\_\_

## Assessment

1. Test tube number of the person that infected all other students: # \_\_\_\_\_

2. Calculate the percent of students that were infected by the virus at the party.

\_\_\_\_\_ %

3. How would the results differ if you exchanged fluids with more/fewer people in class?

More: \_\_\_\_\_

Fewer: \_\_\_\_\_

4. How would the results differ if people were continuously entering and leaving class?

\_\_\_\_\_



### Class Exchange Data

Student #	Exchange #1	Exchange #2	Exchange #3	Exchange #4
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
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