

## Microbe Collection Lab

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**Purpose:** To demonstrate that bacteria can be found on every surface

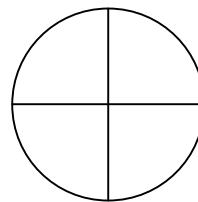
**Background:** Our hands do so many things and they touch so many surfaces and substances. They are also covered with many small crevices in which microbes can hide. When we handle food or put our hands in our mouth, we enable many microbes to take a trip into our inner body unless we wash our hands and other objects properly before they are used. We touch many surfaces everyday from which we can collect bacteria on our hands.

### **Teacher Prep:**

Prepare petri plates containing TSA agar for the class – each group (individual) should have 1 dish.

### **Student Procedure:**

1. Divide one nutrient agar plate into four quadrants
  - a. Label the quadrants of each plate 1 through 4
  - b. Label one quadrant “control”
2. Students may choose three areas throughout the school to swab.
3. Students should dip sterile swab in sterile water and then swab area of interest.
4. Students should streak the swab on a section of the petri plate – repeat two times.
5. Incubate the plates inverted at 35C or room temperature until the next class.
6. Record how many colonies appear on each quadrant. Also describe the size and color of each colony.



### **Thinking:**

1. Why is it not necessary and, in fact, undesirable to remove all bacteria from the skin?
2. The microorganisms that are normally present on the human skin are not pathogens. Why does a surgeon scrub for 2 to 5 minutes with an antiseptic soap before operation?
3. Why might it be bad to use bar soap instead of a pump?

4. List some diseases (3-4) that can be transmitted on hands.
5. Make some signs for the school restroom that will get students to wash their hands.