**Lab- Antimicrobial Action**

**Purpose**: to test six different antimicrobial products in order to determine which is the most effective

**Materials needed**:
1 Petri dish 7 cotton swabs
Permanent marker to mark dish 7 small paper disks
Pencil to mark paper disks 6 cups of antimicrobials (labeled 1-6)
Paper towel

Each group will be testing the effectiveness of six different antimicrobial products. The products used are: isopropyl alcohol, mouthwash, regular hand soap, triple antibiotic ointment, instant hand sanitizer, and antimicrobial hand soap.

**Directions**
1. After your group has collected the necessary materials, use the permanent marker to divide the SMALLER BOTTOM PLATE of the petri dish into three equal sections (like a peace sign).

2. One student in the group should use a cotton swab to coat the material in the petri dish with a slurry of water and bleu cheese.

3. Using PENCIL, label six paper disks 1-6, making sure the number is easily readable.

4. Using the cotton swabs, dip disk 1 into cup 1, making sure to blot the disk gently on the paper towel to remove excess liquid.

5. Use the cotton swab to place the disk in a section of the petri dish being careful not to press too hard into the gel material in the bottom of the dish.
\*\*MAKE SURE TO USE A NEW SWAB FOR EACH SUBSTANCE \*\*

6. Repeat steps 4 and 5, putting two paper disks in each section of the petri dish—make sure they are evenly spaced and not touching!

7. Place a clean, unlabeled, undipped (dry) paper disk in the very center of the dish. Place the lid back on the dish and tape the lid closed.

8. Turn in your completed petri dish.

9. Start working on reflection/discussion questions on the back of this page.

**Reflection/Discussion**

1. What antimicrobial do you think was in each cup? List your guesses below
1- 4-
2- 5-
3- 6-
2. Which antimicrobial do you predict will be ***most*** effective? (what is your hypothesis?)
3. Which antimicrobial do you predict will be ***least*** effective?
4. What was the purpose of putting the undipped disk in the center of the petri dish?

**Observations- record your observations for each day**

**Monday:** Is there any bacterial growth in your dish? (If no, wait to record on Day 2)

If yes, which area has the most growth? Which antimicrobial do you think was used in this area?

Which area has the least amount of growth? Which antimicrobial do you think was used in this area?

 **Tuesday:** Is there any bacterial growth in your dish **OR** has the growth increased from yesterday?

Which area has the most growth? Which antimicrobial do you think was used in this area?

Which area has the least amount of growth? Which antimicrobial do you think was used in this area?

**Wednesday**
Which area has the most growth? Which antimicrobial do you think was used in this area?

Which area has the least amount of growth? Which antimicrobial do you think was used in this area?