Set up the following stations to expedite the class testing of bacterial counts in meat and milk:

**LABEL TUBES AND PLATES, CREATE TABLE IN NOTEBOOK. THEN,**

**MEASURE OUT DILUENT IN TUBES:**

In front of room, each student:

- 5 sterile capped 16x150 mm tubes in a test tube rack, 5 empty plates.

Label five 16 x 150 mm tubes in rack:

<table>
<thead>
<tr>
<th>tube marking</th>
<th>plate</th>
<th>diluent</th>
<th>aliquot</th>
<th>dilution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk:</td>
<td></td>
<td>9.9 mL</td>
<td>1</td>
<td>0.1 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1.0 mL</td>
</tr>
<tr>
<td>Meat:</td>
<td>Suspn</td>
<td>empty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>$10^1$</td>
<td>9.0</td>
<td>3</td>
<td>1.0 mL</td>
</tr>
<tr>
<td>4</td>
<td>$10^2$</td>
<td>9.0</td>
<td>4</td>
<td>1.0 mL</td>
</tr>
<tr>
<td>5</td>
<td>$10^3$</td>
<td>9.0</td>
<td>5</td>
<td>1.0 mL</td>
</tr>
</tbody>
</table>

**STATIONS FOR MEAT AND MILK ASSAY**

**One Dilution Blank station:** (front desk)

- two flames, one each at the repipets:
  - Repipet with sterile dH$_2$O, set on 9.9 mL (tube 1 = diluent for milk: make one)
  - Two repipets with sterile dH$_2$O, set on 9.0 mL (tubes 3, 4, 5 = diluent for meat: make three)

**Two Meat Weighing Stations** (two stations, side by side on side bench near window):

- One for Beef, one for turkey (etc):
  - two balances, each with a plastic beaker to hold test tube for weighing
  - two 16 x 150 mm test tubes, each in their own rack, each ½ full of 95% EtOH
  - two microspatulas in each of the EtOH test tubes
  - two flames
  - hot soapy water in nearest sink to wash off meat and fat from spatulas
  - quart Mason jar to receive meat suspension after it has been diluted and plated

**Two Meat Suspension Stations** (seats 5 and 9 near weighing stations):

- Seat 5: Repipet with sterile dH$_2$O, set on 3 mL and a vortex
  - eight microspatulas in 16 x 150 mm test tubes ½ full of 95% EtOH
  - flame

- Seat 9: Repipet with sterile dH$_2$O, set on 7 mL and a vortex and a flame

**Four Meat Dilution Stations (in pairs, side by side)** (seats 13, 14, 15 and 16):

- two flames
- two boxes of 2 mL pipets, sterile (Need 5 per student.)
- Four pipet bulbs

**Two Milk Dilution station (side by side)** (seats 7 and 8)

- 100 uL displacement pipets and yellow tips (measure initial milk aliquot)
- 1000 uL displacement pipets and blue tips (to measure the last meat dilution aliquot)
- vortex
- pipet receptacle

**Two Plate Pouring Stations** (seats 17 and 18)

- flame
- deep hot block, 45°C or water bath
- 100 16x150 mm capped tubes with 15 mL melted Plate Count Agar (for class of 20)
  - (be sure hot blocks have correct temp... cover with styrofoam box.)
- tub 2/3rds full of warm water to receive emptied test tubes