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|  |  | 1. *Part 3*    1. Prepare the foams.       1. Cut one foam into a circle with a diameter of \_\_\_ cm.       2. On the circle, draw six parallel lines equidistant from each other, \_\_ cm apart.       3. Draw six more parallel lines perpendicular to the last six lines, also equidistant from each other by \_\_ cm.       4. Excluding the external four corners of the square created, drill holes (using a \_\_ drill bit) on each point of intersection. This will result in a total of 32 holes.       5. Use scissors to enlarge these holes to a \_\_ cm diameter.       6. Repeat steps "a" through "e" using the other foam.    2. Prepare the liners.       1. Place one liner inside the other and make sure they fit smugly.       2. Flip upside-down so that the bases point up. Find the center of the bases and draw circles of radii of 5, 10, 15, 20, and 25 cm on the surface of the base.       3. Drill holes \_\_\_ cm apart from each other along each circle, being sure to puncture both liners and to not allow the liners to move.    3. Prepare the felt.       1. Cut the felt into \_\_ cm by \_\_ cm.    4. Soak 200 Wisconsin Fast Plant seeds (Brassica rapa)       1. Cut 2 paper towels into \_\_\_ cm by \_\_\_ cm.       2. Place one paper towel on an aluminum pan, covering the bottom.       3. Pour \_\_ mL of water into the pan, soaking the paper towel.       4. Scatter the seeds randomly onto the paper towel.       5. Cover the seeds with the second paper towel.       6. Pour \_\_ mL of water into the pan, soaking the second layer of paper towels.       7. Wait six hours, checking after three hours to make sure that the paper towels are still moist    5. Turn on the transformer and allow it to warm up for three hours.    6. After three hours, check the temperature inside each bucket along the edge directly behind the starting point of the wire wrapping.    7. Prepare the light fixture.       1. Cut two PVC pipes into one \_\_ m piece, two \_\_ m pieces, and four more to \_\_ m pieces.       2. Using a \_\_ drill bit, drill through the PCV piping \_\_ cm from both ends of the piping, creating 2 holes.       3. Insert one weird screw into each hole and secure it with a nut and a washer.       4. Insert two- \_\_ m pieces into the three-way PVC connector so as to get a straight line.       5. Repeat step "b" with the remaining two \_\_ m pieces.       6. Insert the two \_\_ m pieces into the remaining hole on each three-way connection, resulting in a "T." These will be the two legs of the light fixture.       7. On the long end of both "T"-like formations, place a corner connection.       8. Insert the final \_\_ m PCV pipe into both corner connections. This is the light fixture’s frame.       9. Hook the chain from lighting fixture onto weird screw.       10. Use a leveler to determine if the setup of the light is level and adjust the lighting if necessary.    8. Preparation for planting       1. Place the two trays on the table \_\_ m apart from each other and equidistant from three sides of the table.       2. Center a piece of felt onto each tray. Place the remaining two pieces of felt perpendicular to these pieces. This will result in 2 pieces of felt per tray.       3. Center the liner on the felt.       4. Fill the liner with \_\_ L of topsoil.          1. Pour topsoil out of into a cardboard container.          2. Break up the clumps and uneven parts in the soil.          3. From a constant height, pour the topsoil into a \_\_ L container (this makes sure that the soil is packed down the same each time)          4. Pour the topsoil in this container into liner.          5. Repeat steps "iii" through "iv" 7 times, for a total of \_\_ L of topsoil.          6. Repeat steps "iii" through "v" for second liner.    9. Place the foam inside each liner.    10. Place 3 seeds into each hole in the foam.    11. Using 1-mL pipettes, pipette 4 mL of water into each hole.    12. Place the buckets on top of the liners.    13. Fill the tray with water until it slightly overflows.    14. Place the lighting fixture over setup and plug it in.   Note: Whenever the light fixture is moved and replaced (when observations and data need to be taken), it is essential to re-level the lighting fixture.   * 1. Fill the tray with water daily.   2. Take data on when plants germinate.   3. Take daily measurements of the environment, including temperature and humidity.   4. After germination, measure the height of the plants, the number of leaves, and the number of flowers on a daily basis for the first fifteen days (i.e. until the plants are too tangled to take measurements). Be sure not to injure the plants while moving the buckets and taking observations and measurements.   5. Take any observations that are of interest.   6. At day \_\_, that stuff we’ll find out later on Friday.   ***Congratulations on completing Part 3.***                                                                                                     [*Next*](http://docs.google.com/data.htm) |