



Name _____



SAFETY: Use care handling the tubes; they will break!

Purpose: To practice collecting, graphing, and analyzing data.

Materials:

| | | |
|----------------|-------------|-----------|
| Set of 3 tubes | Meter stick | Stopwatch |
|----------------|-------------|-----------|

Procedure:

1. Work with your partner.
2. Select one tube (it does not matter which one).
3. Hold the tube vertically (straight up and down).
4. Use the stopwatch to time how long it takes the bubble in the tube to go from bottom to top.
5. Record the time: _____
6. Hold the tube so that it almost horizontal (almost parallel to the floor).
Make sure the bubble is on one end.
7. Put a finger on the bubble.
8. Have your partner use the stopwatch to time how far the bubble moves in 5 seconds:
 - a. Your partner will say "GO" and start the stopwatch.
 - b. At the go signal, quickly turn the tube upright so that the bubble begins moving up the tube.
 - c. As the bubble moves up the tube, move your finger along with the bubble.
 - d. Your partner will say "STOP" at 5 seconds.
 - e. When your partner says "STOP", stop moving your finger.
 - f. Keep your finger on this spot while your partner measures the distance from where the bubble began to you finger in cm.
9. Record this data in the data table.

10. Repeat steps 6 -9 using at least 10 different lengths of time. Use a variety of different times, some long and some short.

Data:

| Distance of Bubble Movement (cm) | | | |
|----------------------------------|----------|-----------|------------|
| Time (sec) | Red Tube | Blue Tube | Green Tube |
| 5 | | | |
| | | | |
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Data Analysis:

Graph this data using a line graph. Remember TAILS & DRY MIX.

1. Make a line graph. Why? _____
2. Graph your data from the red tube. Use a red map pencil.
 - a. Plot the times on the X-axis. Why? _____
 - b. Plot the distance on the Y-axis. Why? _____
 - c. Connect the dots with the map pencil.
3. Graph your data from the blue tube on the same graph. Use a blue map pencil.
4. Graph your data from the green tube on the same graph. Use a green map pencil.

