Chromatography lab **Name _____**

Introduction:

In this experiment you will separate and compare dyes that make up food colors. You will also separate and compare inks. One way to do this is by use of paper chromatography. In this technique, a drop of the mixture is placed on a piece of chromatography paper; the paper is dipped like a wick into solvent. The solvent will dissolve substances from the ink and dye solutions and those will move along the paper. Some substances are more soluble than others. That, along with particle size, results in the substances moving along the paper at different rates.

Objective: To separate particles contained in select inks and dyes, then to use that data to determine the composition of unknown mixtures of inks and dyes.

Procedure:

1. Take 7 strips of chromatography paper and **in pencil** label them A through G.
2. Measure 2.5 cm from the bottom of the strip and draw **in pencil** a line from which to start.
3. Place a **spot** of each solution on the line for the corresponding paper strip.
4. Take 7 test tubes and put about 1 cm of ethanol in the bottom (just enough to cover the bottom curvature of the test tube).
5. Place all 7 strips in the test tubes at the same time, just enough so the very bottom of the strips are in the ethanol.
6. Allow the strips to sit undisturbed in the solvent for **10 minutes**, then immediately remove from the solution and tape them to your lab paper to use as a comparison.
7. Repeat the above procedures for your unknown mixtures, but this time you will have **6 unknown mixtures** to identify. Note that only 2 dyes are mixed together and only 2 inks are mixed together. Your unknown mixtures will not contain one of each!

Unknown #1: _____ & _____

Unknown #2: _____ & _____

Unknown #3: _____ & _____

Unknown #4: _____ & _____

Unknown #5: _____ & _____

Unknown #6: _____ & _____