**Learning Side by Side Lab**

1. Cut 2 pieces of electrical tape (1 inch each).  Using the tape, affix the end of the yarn to the inside bottom of one of the cups.  With the other end of the yarn, repeat with the second cup.
2. Put as much yarn as will fit into one of the cups, and add water until the cup is about half full.
3. Holding the cups close together, pour the water from one cup to the other allowing the yarn to flow with the water.  When the yarn is thoroughly saturated you are ready to begin.
4. Hold the cup with the water directly over the empty cup and pull the yarn taunt.  Slowly pour the water from the top cup into the bottom.
5. What happens? What do you notice about how the water flows?
6. Reverse the position of the cups so the full cup is now above the empty one.  Offset the top cup so it is about one inch to one side of the lower cup.  With the yarn stretched tight between the two cups and the yarn from the top cup stretching over the lip on the side of the cup closest to the bottom cup, pour the water so it flows along the yarn and into the lower cup.
7. What happens? What do you notice about how the water flows?
8. Can you offset the cups several more inches and get the same result? What’s the breaking point for this phenomena?
9. Why does this happen?
10. What would happen if you tried this with yarn that was not already wet? Why do you this that?
11. Find books or other objects that will raise the height of one of the cups above the desk.  Place the cup containing water on top of the raised surface.  Move the empty cup at an angle lower than the top cup.  Move the cups away from each other so the yarn is pulled taunt.
12. Close to the surface of the water, but being careful not to get it in the water, place a drop of food coloring on the yarn inside the top cup.
13. Watch what happens for several minutes. What do you notice?
14. As the color leaves the lip of the cup, use a second color on the yarn just as you did the first color.
15. Repeat each time the previous color leaves the cup until you have a rainbow of colors traveling down the yarn.
16. How much time passes from the time you drop the color onto the yarn to when it travels past the lip of the cup? How much time passes before it reaches the other cup? What could you do to speed up or slow down this movement?