First Handout: Strategy Sheet.

GUESS FIRST:

How many socks we need to draw randomly to guarantee a pair if there are SEVEN colors?

SIMPLIFY:

1) What if there was just one colour? How many sock would you have to pull out to guarantee a pair? (hint: not one, you need two for a pair!)

2) How about two colours? Try all the possibilities.

3) Three colours? Try all the possibilities.

Too hard? Too many cases?

UPEND THE PROBLEM!

4) With THREE colors, how could you NOT get a pair after ONE draw? After TWO draws? THREE draws? …

5) With FOUR colours, how many socks could you pull out, and still be sure NOT to have a match? Could you pull out TWO and not have a match? How about THREE? FOUR? FIVE? SIX? …

6) Now what if you had SEVEN colours to start? Try the same thing:

Could you pull out TWO and not have a match? How about THREE? FOUR? FIVE? SIX? …