I'm Not So Sure Anymore **Name:**
Introduction **Date:** **Hr:**

Turn your books to page 179 and read the Introduction.

1. Pick two different numbers from 1-6 to play the Apple Lottery: _____ and _____

2. Now, play the Apple Lottery on your calculator:
   - hit APPS
   - scroll down to Prob Sim
   - hit enter
   - hit enter again
   - go to #6 Random Numbers
   - Hit the ZOOM key to set up Lottery
   - Numbers: 2, Range: 1-06, Repeat: No
   - Hit Graph button to select OK
   - Lottery is ready, hit ENTER to draw

3. Tally your results for 25 draws.
   RED: match 0 numbers
   GREEN: match 1 number
   YELLOW: match both of your numbers

RED	GREEN	YELLOW

4. Go to Mr's Cottrill's website, go to AGI and click GOOGLE DOC link. Record your results of your trials in the spreadsheet (Be sure you are in the right hour)

Turn your books to page 183 to answer the following:

What is EXPERIMENTAL PROBABILITY?

What is the division problem (the ratio) to calculate experimental probability?

Example: If you toss a quarter 50 times and 35 times you obtain heads, what is the experimental probability of obtaining:

Heads: _____ Tails: _____

Based on **your** results, what is the experimental probability of:

a) Winning a RED apple _____

b) Winning a GREEN apple _____

c) Winning a YELLOW apple _____

d) Winning ANY color apple _____

Class Results:

Winning a Red: _____ Winning a Green: _____ Winning a Yellow: _____

Total # of Trials: _____

Based on the **class** results, what is the experimental probability of:

a) Winning a RED apple _____

b) Winning a GREEN apple _____

c) Winning a YELLOW apple _____

d) Winning ANY color apple _____

DISCUSSION:

1. Compare the experimental probabilities of YOUR trials and the CLASSES trials. WHich do you believe will give the better estimate of the true chances of winning? Explain your response in complete sentences.

2. Explain why the experimental probability of winning an apple in the Apple Lottery is 1.

3. What other methods could be used to generate two random numbers for the Apple Lottery?

4. Do these methods guarantee that two different numbers will be generated?

5. What advantages might there be in using technology to simulate the Apple Lottery?