Beetle Sample Data Sheet

1. Pick a random slide to use as your first sample. (Do not use the final slide.)
2. Count out the number of beetles of each color, and record those numbers in the table below.
3. Calculate the percentage of each color in the sample.
   To calculate your percentages, divide the number of beetles of one color by the total number of beetles in the sample, and multiply by 100.

$$\frac{\text{number of beetles of a particular color}}{\text{total number of beetles}} \times 100 = \% \text{ of that color in the set of beetles}$$

TABLE 1

Sample Number	Orange	Green	Yellow	Blue	Total # in the Sample
PERCENT OF EACH COLOR					■

Based on the sample you took above, what color do you think occurs most within this beetle population?

Let's increase our sample size!

1. Copy the sample data from Table 1 into the first row of Table 2.
2. Now, pick a different slide, count out the number of beetles of each color, and record that data on the second row.
3. Calculate the "Table 2 Totals" by adding together the values in each column.
4. Use these new totals to calculate the percentage of each color in your larger sample.

TABLE 2

Sample Letter	Orange	Green	Yellow	Blue	Total # in the Sample
TABLE 2 TOTAL					
PERCENT OF EACH COLOR					■

Based on this larger sample, what color do you think occurs most within this beetle population?

Let's increase our sample size again!

1. Copy the "Table 2 Total" row from the previous table into the first row.
2. Choose another two samples from the slides. Count the number of each color and record in the following two rows.
3. Calculate the "Table 3 Totals" by adding together all the values in each column.
4. Use these new totals to calculate the percentage of each color in your larger sample.

TABLE 3

Sample Letter	Orange	Green	Yellow	Blue	Total # in the Sample
TABLE 3 TOTAL					
PERCENT OF EACH COLOR					

Based on this larger sample, what color occurs most within this beetle population?

Reflection

1. Look at your data. How did your "Percent of Each Color" change as you collected additional samples?

2. Look at the final slide that breaks down the population totals. Based on your findings and this new data, did accuracy improve, degrade, or stay the same as you increased your sample size?