**Coin Flipping / Probability Lab**

***In this activity we will look at how chance affects outcomes and how the amount of data collected effects results.***

1. With a partner flip a coin 10 times. Record the number of times it landed heads or tails.
2. Graph the results using a bar graph.
3. Now flip the coin 50 more times, recording the data for those additional flips as well.
4. Graph the results.
5. Put your results on the board and complete a graph for the results of the entire class.

***Please answer the following questions.***

1. What is the chance of a coin landing heads up, based on your 60 flips?

(Number of heads/total number of flips)

1. What is the chance of a coin landing tails up, based on your data?
2. What is the expected chance of a coin landing heads?
3. If the coin lands heads up five times in a row, what would be the chance of tails on the next flip?
4. How does the number of flips affect the results?
5. The expected result for the class is 50% heads. How close were we to the actual results?
6. Would the results be different if we flipped the coin 100,000 times? Why?

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| **Heads**  **(10 flips)** | **Tails**  **(10 flips)** | *Heads*  *(50 flips)* | *Tails*  *(50 flips)* | Heads  (class data) | Tails  (class data) |
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