



Heads & Tails Data Collection



DIRECTIONS:

- Place a penny and a dime in a cup.
- Shake the cup.
- Spill the coins onto the desktop.
- Record the number of heads and tails showing by marking the coins in a box. [Use H for heads and T for tails.]
- Player A wins if the coins match (both heads or both tails).
- Player B wins if the coins do not match (one head and one tail).
- Repeat 11 more times.
- Cut apart your boxes and add them to the class graph.
- Try to decide if the game is fair or not. Write about whether both players have an equal chance of winning.
- Play the game again if you have time to see if the results are the same.



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DIRECTIONS FOR CLASS GRAPH:

- Model for students how to record the results of the coin toss.
- Students should record the penny result on the larger coin and the dime result on the smaller coin using H for heads and T for tails.
- Place one of the icons in each row or column of a pocket chart, staple or tape to the board or bulletin board for the class graph.
- Students cut apart their individual results and add them to the class graph.
- Students should analyze the results and compare these to the expected results. Students often fail to see that there are actually FOUR different outcomes using the two different coins to help them make sense of why the TH combination is more common than the HH or TT.
- Students may create a tree diagram for this data collection activity and calculate the probability of each outcome.

