



**Lesson 1: Diving Into Statistics**

The average is a descriptive statistic used to give information about a data set. The average is also called the arithmetic mean and can be calculated by adding up the values in a data set and then dividing by the number of values in that set. Are you ready to dive into the “mean” pool?

**Doing the Science**

1. Start the Stats Entertainment Simulation by clicking on the “Sim” tab.
2. Click the “Diving Die” icon. In this part of the simulation you’ll make six dives. Your overall diving score will be the average of all six of your dives.
3. Adjust the “Number of Spins” and “Number of Twists” buttons to try to enter the water as cleanly as possible to receive the highest score.
4. Once you have adjusted the Number of Spins and/or the Number of Twists, click the “Dive” button to start your dive.
5. Note and record in Table 1 your score for dive #1.
6. Repeat steps 3 – 5 for your remaining five dives. Remember that you want to enter the water without making a large splash. Make sure to record your results in Table 1.
7. Add up your six dive scores and record their sum in Table 1. The Greek letter  $\Sigma$  is a symbol that represents the phrase, “the sum of the values.”
8. Click the “Calculate” button to find your average dive score. Record this value in Table 1.

**Table 1. Dive Scores**

Dive #	Dive Score	Dive #	Dive Score
1		4	
2		5	
3		6	
$\Sigma$ dive scores =			
Average dive score =			

**Do You Understand?**

1. Does the average value have to be a member of the original data set? Please explain your response.
2. If you made ten more dives, which measure would exhibit a greater change in its value, the  $\Sigma$  of your dive scores or your average dive score? Make sure to explain your response.
3. What would happen to your average dive score for your six dives if you threw out and did not include the scores of your worst two dives into your average score?