

Braden Wedel

*The Effect of Sand/Gravel Ratio on the Strength of Concrete*

I performed my experiment to see how changing the ratio of sand to gravel in concrete affects its strength. This experiment is important because it should show how to produce stronger, higher quality concrete. My hypothesis was that the batch of concrete with the most sand would be the strongest. To start my experiment, I built 14'' by 2'' by 2'' forms. Then I mixed concrete with different ratios of sand to gravel. A month later, I broke the concrete bars with weights and recorded my results. The two batches with the least and most sand basically tied in strength, and the batch with an even ratio lost by twenty pounds. I believe that two batches tied because there was not enough difference in the ratios to make a difference in strength. Technically, my hypothesis was correct, but I was very surprised that the concrete with an even ratio lost badly, because I thought it would be second place.