



**CALIFORNIA STATE SCIENCE FAIR  
2004 PROJECT SUMMARY**

<b>Name(s)</b> <b>Daisuke A. Gatanaga</b>	<b>Project Number</b> <b>J0211</b>
<b>Project Title</b> <b>How Does the Distance between Dominoes Affect the Speed that Dominoes Fall?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My project was to determine how the distance between dominoes affects the speed that the dominoes fall. <b>Methods/Materials</b> The dominoes were lined up in the same direction with distances of 0.5, 1.0, 1.5, 2.0, 2.5 3.0, and 3.5cm between the dominoes until they measured 1.5m or 3.0m in a straight line. A stopwatch was used to measure from when the first domino was pushed over to when the last domino touched the ground. There were 10 trials in each condition. <b>Results</b> The results show that the speed of the falling of the dominoes is in inverse proportion to an increase of the distance between dominoes. The speed of falling dominoes that has the distance of 0.5cm between the dominoes was fastest in both the 1.5m and 3.0m lengths. <b>Conclusions/Discussion</b> The data did not support my hypothesis, which was that the distance of 2.8cm between the dominoes would give the fastest speed. The results showed that the 0.5cm distance between the dominoes was the fastest in both the 1.5m length and 3.0m length. This is because more dominoes fell, causing the dominoes to gradually speed up. Also, the graph shows that any distance shorter than or equal to 1.75cm between the dominoes had the speed of 3.0m faster than the speed of 1.5m, and any distance longer than or equal to 2.0cm had the speed of 1.5m faster than the speed of 3.0m. This is because the more dominoes there are, the faster the speed is because of the weight adding up as each domino falls. And, since more dominoes are needed for lining up a distance of 3.0m, the speed of 3.0m is faster than the speed of 1.5m for any distance between the dominoes shorter than 2.0cm. However, any distance between the dominoes longer than 1.75cm would have a less amount of dominoes, therefore having a less amount of weight added up and because of that, the speed of 1.5m was faster than the speed of 3.0m.	
<b>Summary Statement</b> My project is about how the distance between the dominoes affects the speed that dominoes fall.	
<b>Help Received</b> My parents helped me line up the dominoes and measure the time that the dominoes fell.	