



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Aaron E. Boussina	Project Number J1206
Project Title Fibonacci in Nature	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of my project was to observe the occurrences of Fibonacci numbers, sequences, the Fibonacci ratio, and the Fibonacci spiral in nature.</p> <p>Methods/Materials The experimental methods were as follows: 1. I measured the three sections of people's fingers, and calculated the ratios of the three bone sections in each finger in order to confirm the Fibonacci Ratio. 2. I went outside to observe plants and flowers in order to find Fibonacci numbers in their amount of leaves and pedals. 3. I organized the Fibonacci numbers in a table and derived the Fibonacci ratio, spiral, and Fibonacci sequences.</p> <p>Results Results indicate that Fibonacci numbers, sequences, ratios, and spirals occur in plants, flowers, rabbit breeding patterns, shells, pinecones, human fingers and much more in nature.</p> <p>Conclusions/Discussion It was concluded that there is an abundance of Fibonacci numbers, sequences, ratios, and spirals in nature. There are Fibonacci numbers all around us, wherever we go; which confirms my hypothesis that Mathematics is part of the natural process (nature is a Mathematician).</p>	
Summary Statement Observing the occurrences of Fibonacci numbers, sequences, the Fibonacci ratio, and the Fibonacci spiral in nature.	
Help Received Parent helped glue items to the display board and proof-read my work. Parents and friend provided their fingers for measurement.	