



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Nanor H. Kassabian	Project Number J2009
Project Title Too Hot, Too Cold, Just Right: The Effect of Temperature on the Development Time of Drosophila melanogaster	
Abstract Objectives/Goals The objective of my experiment was to find out how temperature affects the development time of Drosophila melanogaster. My hypothesis was that as the temperature increased, the development time of the fruit flies decreased. Methods/Materials First, I anesthetized the flies by cooling them in the freezer. Next, I separated the males from the females. Then, I put ten pairs of each into nine labeled containers. I set the fruit flies in the areas of each of their experimental temperatures, and observed them for their development. The materials that I used were: areas with the experimental temperatures, wild fruit fly culture, magnifying glass, fruit fly media, thin paint brush, light source, gloves, cold surface, nine labeled containers with lids, and a measuring cup. Results I found out that at the lower and higher temperatures there were less flies. There were much more flies at 25° C. At 28° C, the fruit flies developed quicker, but were less. The 20° C temperature resulted in the longest development time of Drosophila melanogaster. Conclusions/Discussion These results agreed with my research, but the development time of all three temperatures took longer than I expected. For example, at 20° C, development time took about 23 days, but according to my research, at 18° C, it should have taken about 19 days. At 25° C, development time took about 16 days, but based on my findings should have taken about 9 days. At 28° C, development time took about 11 days, but based on my research should have taken 7 days.	
Summary Statement My project is about how temperature affects the development time of the fruit fly, Drosophila Melanogaster.	
Help Received Mother helped in handling the flies; Father helped in organizing the display board and taking pictures.	