



**CALIFORNIA STATE SCIENCE FAIR  
2016 PROJECT SUMMARY**

<b>Name(s)</b> Avery E. DeVore	<b>Project Number</b> <b>J2103</b>
<b>Project Title</b> What Essential Oil Kills Flies the Fastest?	
<b>Abstract</b> <b>Objectives/Goals</b> Which Essential Oil will kill flies the fastest between Lemongrass, Lavender, Basil or Eucalyptus? <b>Methods/Materials</b> Put the 300 unhatched fly larva in a container and cover with netting to let flies hatch for 3 days Put fully grown flies in freezer for 15-20 minutes so they fall asleep Separate flies into 75 fly groups and put each group into a separate container and put designated Essential Oil on Qtip and place in container and cover with netting and tape close. Take pictures at 1, 3, 6, and 24 hour time periods and count number of active flies in each container then record the data. Materials List: Cage Unhatched larvae flies Essential Oils Netting Qtips <b>Results</b> After conducting 3 trials, my results indicated that Basil was the fastest in eliminating flies followed closely by Eucalyptus. Lemongrass and Lavender were significantly less effective. Of the 75 starting active flies Basil had 21.6, 10.3, 6.6, 1.6, Eucalyptus had 24.3, 13.3, 8.6, 7.6, Lemongrass had 50.3, 38, 32.6, 30 and Lavender had 49.3, 39, 32, 31.3 active flies remaining on average at the 1 hour, 3 hour, 6 hour, and 24 hour mark respectively. <b>Conclusions/Discussion</b> The average number of active flies for all three trials for Basil and Eucalyptus was consistently and significantly less than for Lemongrass and Lavender for each of the time periods tested. For example, after starting with 75 active flies, the average number of flies still active for all three trials after 1 hour was 24.3 and 21.6 for Eucalyptus and Basil, respectively. At the 1 hour time period there were an average of 50.3 and 49.3 active flies in the Lemongrass and Lavender control group. After 6 hours the average number of active flies was 8.6 and 6.6 for Eucalyptus and Basil, respectively. At the same 6 hour time period the average number of active flies was 32.6 and 32 for Lemongrass and Lavender, respectively. The results clearly show that Basil was the most effective followed closely by Eucalyptus. Lemongrass and Lavender were not very effective at all.	
<b>Summary Statement</b> I conducted an experiment using three trials and four different Essential Oils to determine which one would kill flies the fastest.	
<b>Help Received</b> My Science teacher Ms. Tammy Levy and my parents.	