



**CALIFORNIA STATE SCIENCE FAIR  
2014 PROJECT SUMMARY**

<b>Name(s)</b> <b>Kaitlyn A. Russo</b>	<b>Project Number</b> <b>S1125</b>
<b>Project Title</b> <b>Benthic Macroinvertebrate Bioassessment of the Fresno Rivers</b>	
<b>Abstract</b> <b>Objectives/Goals</b> Assess the levels of pollution in the fresnos rivers by testing and looking at the diversity of the macroinvertebrates. <b>Methods/Materials</b> After I selected three rivers I waded into the the river to get soil samples. I Place the kick net at the bottom of the river and kicked dirt into the net. Next I collected 2 cups of water from each river. Then I went home and tested the water for phosphate, nitrates, and copper and analyzed the dirt for macroinvertebrates. Lastly, I looked for correlation between diversity of macroinvertebrates and pollution. I used a pole, a pillowcase, metal hanger, 6 storage containers, LaMotte Water Pollution Detection Kit, and duct tape. <b>Results</b> After my experiment, I found the San Joaquin River to be the most contaminated with a nitrate level at 3 ppm, phosphate level at 2.3 ppm and a copper level at .15 ppm. The Kings River to be the least contaminated with a nitrate level at 1.4 ppm, phosphate level at .6 ppm, and a copper level at 0 ppm. I also found the least amount of diversity of macroinvertebrates in the San Joaquin river and the most diversity in the Kings. <b>Conclusions/Discussion</b> After completing my investigation on the level of pollution in rivers based on the amount of macroinvertebrates, I found that my first hypothesis was supported by my data and my second one was not. The most contaminated river was the San Joaquin, and it did not have a wide variety macroinvertebrates. In the end, I learned that we as people need to be more careful on what we let go into the river because it is killing the macroinvertebrates and that affects all species within the food chain...including us.	
<b>Summary Statement</b> I tested to see if their was any correlation between diversity of macroinvertebrates and pollution	
<b>Help Received</b> Mother drove me to my locations and helped tape things on straight	