



# CALIFORNIA STATE SCIENCE FAIR 2008 PROJECT SUMMARY

<b>Name(s)</b> <b>Bianca J. Jeffs</b>	<b>Project Number</b> <b>J1012</b>
<b>Project Title</b> <b>How's Your Beach?</b>	
<b>Objectives/Goals</b> To find out how animals that live in the sand are affected by people and also if people affect the total number of animals as well as the diversity of species that can be found? It was important to find out if people do have an affect and what activities are the most harmful?	
<b>Abstract</b> <b>Methods/Materials</b> I made a 3 ft. square from pipes that we could take to the beach; other equipment included: bucket; shovel; notebook; pencils; camera and tide chart so that we could always dig at low tide. I chose five beaches, Manresa, La Selva, Hidden Beach, Rio del Mar and Capitola. All of the beaches have streams or drainages that flow through them. I dug at each beach twice on different days at about one week apart. At each beach I dug to a depth of 6" and in the same place each time, around 15 to 20 feet from the waves. If I found any animals I noted my results in my notebook, took photographs and put the animal in the bucket.	
<b>Results</b> I found a total of seven different species. The species that I found were: Sand Crabs; Sand Fleas; Clams; shrimp; two types of clam worms and also one small fast swimming triangular shaped creature. There was a big difference between the five beaches that I studied, Manresa and La Selva had more creatures as well as greater diversity of species, Hidden Beach had some sand animals but not so many, and Rio del Mar and Capitola had almost no wildlife, also the sand seemed oily. At my second dig, which was after heavy rain, there were way less animals than the first dig!	
<b>Conclusions/Discussion</b> Why was there such a big difference in the beaches when they are not very far away from each other and why did rain make such a big difference? It could be recreational use, because the beaches further North are the busiest, but the main reason is water bourne pollution from runoff. Capitola and Rio have major creeks with large watersheds which flow all winter. The creeks at the other three beaches only flow after big storms or long periods of rain. This explains why I found so much less wildlife in my second digs. Also creeks at Manresa, La Selva and Hidden Beach run through areas with less development so the water is less polluted. Hidden Beach is however affected by long-shore drift from Rio del Mar. The health of our beaches is difinitely affected by people, who sometimes live far inland and not just when they play in the sand.	
<b>Summary Statement</b> The question I was asking myself was: How much are we affecting our beaches? because if we are affecting our beaches it is a good example of just how much we are affecting our planet.	
<b>Help Received</b> My Dad helped me to build a 3 foot square transect that I could take to the beach and he also helped me to dig. My sister helped dig and catch the animals with me. My Mom helped me find out what the worms were and she also helped me to type my report and make my board look nice.	