



**CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY**

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Project Title The Effect of Cigarette Litter on the Urban Ecology of Armadillidium vulgare	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of this study is to determine and quantify the effect that leached soil pollution has on pill bugs (<i>Armadillidium vulgare</i>)</p> <p>Methods/Materials Materials use include: small plastic containers as habitat for the isopods, hygrometer, stopwatch, fish food, heterogenous soil from natural habitat. By measuring the average curling and uncurling times of five pill bugs in each of seven levels of exposure to cigarette litter in soil, each day for five weeks.</p> <p>Results Results indicate that curling time increases in <i>A. vulgare</i> that have been exposed to greater quantities of cigarette butt litter. The death rates of the isopods exhibit evidence that exposure to cigarette litter is detrimental to these important decomposers.</p> <p>Conclusions/Discussion Cigarette butt litter leeches chemicals into the soil. Soil pollution is less addressed than air and water, however, directly affects the ecosystems of land-based decomposers.</p>	
Summary Statement Soil pollution, in the form of substances leached from cigarette butts, have an effect on populations of urban decomposers, as measured by behavioural response.	
Help Received My Science Research teacher helped us sample and collect populations of isopods.	