



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Breanne D. Anderson	Project Number J0701
Project Title How Different Types of Soil Affect Landslides	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My goal for this project was to understand how different types of soil react to rain and potential for landslides they create.</p> <p>Methods/Materials The method I used to collect my data was I selected dirt, sand, and topsoil. I created a slide board that I divided into three different sections(dirt, sand, and topsoil). The main components of the project was to sprinkle each soil from lightest rain to heavy rain. Each soil responded to the water differently, but initially the dirt flowed more freely than the others.</p> <p>Results Sand effects landslides. It proved that all hillside land is potentially landslide land, if enough rain or water falls on it. The value is that people who live on hillsides need to be aware of the potential of slides on hillsides. My results indicate that by applying different amounts of rain to soils, that over time the soils will start to slide. Sand provided the largest landslides. The sand responded to the water more quickly then the other soils. Dirt was next because it initially began to absorb water and once it became completely absorbed with water it began to slide. Topsoil was least responded to water, for it kept hardening and instead of sliding down it would flow down in larger clumps. The water had the greatest slide impact on the sand.</p> <p>Conclusions/Discussion After I reviewed the results with simulated light rain, medium rain, and heavy rain, what I determined by looking at the soil movements was that sand is really loose and grainy and would be more affected by water because nothing is bonding the sand together. Once water touches the sand, the sand quickly flows as compared to dirt. Dirt will absorb water, but after strong rains or water contact it begins to run more freely. Topsoil would do the exact same thing, but topsoil hardens when it comes into contact with water. It was my belief that topsoil would be more susceptible to landslides than sand and dirt. Initially in the light rain experiment, it appeared that dirt would provide the heaviest landslide capability, but when we tested the medium rain the dirt absorbed the water and did not flow as freely as initially. results are accurate</p>	
Summary Statement How different types of soils react to rainfall.	
Help Received Dad helped build the display; Mom and Dad helped get the 3 different types of soils;	