



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Sara Newton; Alex Wolf	Project Number 22751
Project Title Science Friction	
Objectives/Goals To determine if static and sliding friction is affected by surface texture and the weight of an object. Abstract Methods/Materials Method Glue three different sandpaper textures onto painted wood, leave space for painted wood texture. Drill three holes in wood block for weight placement. Attach Newton scale to 1.5N wood block. Pull the scale across the four different textures to measure the static friction and the sliding friction at a speed that is moving at a constant rate which means it stays at the same speed every time. Record the static and sliding friction onto a data table. Repeat steps 1-3 with 2.0N and 2.5N wood blocks. Materials Painted wood Fine sandpaper Medium sandpaper Rough sandpaper Wood block 3 .5N weights Two Newton scales Glue Results 2.5 Newton sliding body weight had the greatest friction, 2.0 Newton body sliding body weight had the second greatest friction, and 1.5 Newton sliding body weight had the least amount of friction. Rough sand paper had the greatest friction, medium sandpaper had the second greatest friction, fine sandpaper had the third greatest friction, and painted wood had the least amount of friction. Conclusions/Discussion We came to the conclusion that over the surface texture the object slides across and the weight of the object that is sliding across the surface affects sliding and static friction. We also discovered that there was a more drastic change between the friction on the painted wood and the fine sandpaper more than any other texture change. This could be because the fine sandpaper is a lot rougher than the painted wood and the	
Summary Statement It's about finding if surface texture and the weight of an object affects static and sliding friction.	
Help Received Parent helped assemble lab set up.	