



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

<b>Name(s)</b> Gary R. Western	<b>Project Number</b>  22232
<b>Project Title</b> Music Tests Involving Digital Instruments	
<b>Objectives/Goals</b> I wanted to see if the amount of a person's musical training and background affects their recognition of several different electronic musical instruments (MIDIs). <b>Abstract</b> <b>Methods/Materials</b> First, I created a MIDI (music file with computer-synthesized instruments) with two arpeggios (scales up and down) and copied it to make five MIDIs. I then changed each identical MIDI to a different musical instrument. I made a CD of these MIDIs and played them for 100 people. I made 100 copies of a survey with information such as, "How often do you listen to music?" Once they had finished with this section, there was another section with five blank lines where they would write what they thought each MIDI instrument was. I collected the surveys, tallied the information, and graphed it. <b>Results</b> As the data was graphed, I was very surprised. The number of people who listened to music the least and didn't play an instrument was much higher than the number of people with lots of musical background, therefore making up the majority of the correct answers. <b>Conclusions/Discussion</b> I believe that the people who listened to music more were expecting something that they knew about in music that others didn't, and therefore thought they heard something that wasn't there. The people without musical background might only hear what is there, not what they expect it to be.	
<b>Summary Statement</b> My project is about the effect of a person's musical background on electronic musical instrument recognition.	
<b>Help Received</b> My parents helped me come up with an idea and to proofread my work, and my science teacher gave suggestions on what to do next.	