



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Kevin R. Kocher	Project Number J1125
Project Title Radiation Resistance	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My objective is to determine which material will block the most x-rays.</p> <p>Methods/Materials Sixteen different materials were collected: lead sheeting, which was used as a control for full blockage of x-rays, lead foil, iron, rock, 3/4 inch thick plywood, 2x4 lumber, 4x4 lumber, a two-inch-thick paperback book, a two-inch-thick hardcover book, sheet metal, aluminum foil, glass, plexiglass, sheet rock, leather, and a paper cup of water. I also used nothing, or "air" as a control for no blockage of x-rays. Each variable was then placed on a quarter that was on top of an x-ray film packet. The quarter was there because it could block all of the x-rays and I could have a visual comparison when the films developed. I then took the x-rays and developed them in an x-ray processor. I did this with each variable and ran the experiment two more times, using a paper clip instead of a quarter on the second trial and a dime on the third.</p> <p>Results I will arrange my results in order from most blockage to least blockage. The rock and the lead foil blocked the most x-rays, followed by iron, water, the hardcover book, 4x4 lumber, sheet metal, 2x4 lumber, glass, sheetrock, 3/4 inch thick plywood, the paperback book, leather, aluminum, and plexiglass.</p> <p>Conclusions/Discussion In conclusion, the most effective materials for blocking x-rays are rock and lead.</p>	
Summary Statement In this project, I tested materials to see which ones blocked the most x-rays	
Help Received My mother helped process x-rays and glue board	