



**CALIFORNIA SCIENCE & ENGINEERING FAIR
2019 PROJECT SUMMARY**

Name(s) Julia de Andrade	Project Number J0906
Project Title Which Surface Is the Most Reflective?	
<p style="text-align: center;">Abstract</p> <p>Objectives The objective of this study is to see which surface, cement, grass, asphalt, and sand, will reflect the most amount of ultraviolet rays.</p> <p>Methods UV measuring beads, UV measuring putty, UV reading card, cement surface, grass surface, sand surface, asphalt surface, and UV blocking glass. All three measuring tools were placed above each surface in the direction of the sun, blocked by UV blocking glass, to measure reflection.</p> <p>Results The experiment was performed 10 time on each surface and the results indicated that the sand surface reflected the most amount of ultraviolet rays.</p> <p>Conclusions The results showed that the sand surface reflected the most amount of ultraviolet rays. This means that, while many parks and playground use sand because it can cushion falls and protect children, sand reflects the most amount of UV rays which too much exposure to, can later on cause skin cancer and eye damage. Which means it is not the safest surface for kids and can harm kids.</p>	
Summary Statement I showed that a surface of dry sand reflects the most amount of ultraviolet rays compared to a cement, grass, or asphalt surface.	
Help Received None. I built and conducted the experiment myself.	