



**CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY**

Name(s) Daniel H. Hudak	Project Number J2012
Project Title Is a UV Wand More Effective than Household Sprays at Germ Killing?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of this experiment is to determine if a \$50 ultra violet wand is more effective at disinfecting surfaces than 409 and Lysol.</p> <p>Methods/Materials Cleanwave UV Wand by Verilux, 409 spray, Lysol spray, school tables, agar petri dishes, and sterile swabs.</p> <p>Results The UV Wand did not perform as well as expected. Lysol spray did the best at disinfecting an area than either the 409 or UV Wand. The UV Wand had 3 out of 7 plates with bacteria on them, Lysol had 1 out of 7 plates with bacteria on them and 409 had 5 out of 6 plates with bacteria on them.</p> <p>Conclusions/Discussion Although the UV Wand did not perform the best against Lysol, it is more effective than 409. Also, this UV Wand is not as high-powered as UV Wands used in hospitals and medical centers. As we move forward in technology, the UV Wand has the potential to be the next best thing for disinfecting large areas instead of using messy sprays that can only clean a small area at a time.</p>	
Summary Statement The conclusion of the experiment shows that the most effective cleaning agent is Lysol out of: a UV Wand, Lysol spray, and 409 spray.	
Help Received I designed and performed the experiment myself.	