



California Science Center
CALIFORNIA STATE SCIENCE FAIR
2001 PROJECT SUMMARY

Your Name (List all student names if multiple authors.) Neil R. Tolman	Science Fair Use Only S1118
Project Title (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9) 3-D Chemistry	Division _ Junior (6-8) <u>X</u> Senior (9-12)
Preferred Category (See page 5 for descriptions.) 11 - Mathematics & Software	
Abstract (Include Objective, Methods, Results, Conclusion. See samples on page 14.) Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges.	
<p>Objective: My objective was to create a computer program to better illustrate molecular models of VSEPR (Valence Shell Electron Pair Repulsion) theory, 3-dimensionally.</p> <p>Methods: Using a program called 3-D studio MAX, I scripted coding for a sphere and cylinder, meshed them together, then applied a smoothing plug-in to it. I then animated the model for rotation to illustrate a 360 degree view of the molecule.</p> <p>Results: I successfully scripted over 12 molecules that illustrated full animated rotation and the 3-dimensional illusion.</p> <p>Conclusion: The 3-dimensional computerized models I scripted illustrated VSEPR theory in a format that appears easier to follow than other less sophisticated illustrations and was successfully completed with each molecule tried.</p>	
Summary Statement (In one sentence, state what your project is about.) I scripted computer coding, in a 3-D program to illustrate and animate VSEPR theory molecular models	
Help Received in Doing Project (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4.	