



**CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY**

Name(s) Erin M. deCastongrene	Project Number 36631
Project Title Pegs and Programming	
Abstract Objectives/Goals The objective of my project was to write a computer program that models peg solitaire. I wanted to make the program learn to get better at the game over time. Methods/Materials Laptop computer with Snap! programming language, which is based on Scratch. I wrote a program using Snap! that models peg solitaire and learns through trial and error, then tested it to see if it improved. Results My program was very successful at learning to get better at peg solitaire. There was a substantial increase from its starting win percentage to its win percentage after testing it with the learning software. Conclusions/Discussion I built a software model of peg solitaire that successfully learns through trial and error to get better at the game. After many trials, the program performed better than it did initially. Since it was improving, my program is proved to be working.	
Summary Statement I wrote an effective computer program that models peg solitaire and learns to improve.	
Help Received I designed and built the program myself after an overview from my father, a computer scientist, on his programming process.	