Student research projects provide an opportunity for students to work on more open-ended, less well-defined problems and can be a valuable aid to their education. However, choosing problems that are of an appropriate scope and difficulty can be challenging. In this talk I will discuss the success I have had with projects involving the computer algebra system Sage. The students have both been students planning to attend graduate school and students planning to enter industry. Their projects have ranged from purely algorithmic implementation problems to theoretical investigations aided by computational examples. I will discuss more generally how to choose an appropriate topic involving computation and how to identify students that succeed with these types of projects. (Received September 15, 2014)