962-L1-225 **Eve A. Torrence*** (etorrenc@rmc.edu), Dept. of Mathematics, Randolph-Macon College, Ashland, VA 23005. *Mirrors and Chances: Examples of Individualized* Mathematica *Projects for Calculus.*

The teaching of calculus in the United States has experienced an evolution over the past decade. At Randolph-Macon College our calculus sequence has had its own little revolution. We have moved from traditional calculus, through Duke University's Project CALC, and now on to our own brand of reform calculus that we feel borrows the best from many approaches.

I will discuss two particularly successful projects that I designed and their place in the evolution of our calculus courses. They are unique for several reasons, one being that the students seem to enjoy them. Both can be assigned individually by giving each student a unique case to examine.

These projects include significant work on the computer that cannot be done by hand. The first project is from calculus I and involves comparing the reflection of light rays off a circular mirror and a parabolic mirror. We discuss the relevance of this application to their satellite TV dish.

The second project is from calculus II and brings together many ideas from the semester. We use a variety of approximation techniques to estimate areas under the standard normal probability density function and compare the computing power needed for each method. (Received August 29, 2000)