

1116-M5-145 **Philip R Mallinson*** (pmallinson@exeter.edu), 74 Court Street, Exeter, NH 03833.
Constructing The Conic Sections By Paper Folding.

The Common Core State Standards for Mathematics urge that topics be presented in a variety of representations, such as tactile and visual as well as analytic. The analytic study of the conic sections is a standard topic in the precalculus curriculum. I argue that the analytic approach is enriched when accompanied by powerful visual and tactile methods. I show how the envelope of certain creases formed by folding a sheet of paper marked with a point, or a point and a fixed circle, will generate a parabola, an ellipse or a hyperbola, depending on the location of the point with respect to the circle. Finally I show that these geometric representations are consistent with the standard locus definitions of these conics. (Received August 06, 2015)