1096-J5-1894   **Teresa E. Moore*** (`moore@ithaca.edu`), Department of Mathematics, 953 Danby Road, Ithaca College, Ithaca, NY 14850, and **L. Christine Kinsey** (`kinsey@canisius.edu`), Department of Mathematics & Statistics, Canisius College, Buffalo, NY 14208. *Kaleidoscopes in the liberal arts mathematics classroom.* Preliminary report.

We describe a series of activities we have used successfully in liberal arts mathematics courses at our institutions. We begin by experimenting with a single mirror and get the students to describe the effects of reflection of a planar figure, and then investigate successive reflections. We then move on to the effects generated by a hinged mirror and the students deduce the formula for the angles that allow for images that do not overlap. This introduces the idea of the group of symmetries of a regular polygon and the dihedral groups of even degree. The students find the Coxeter polygons and we construct kaleidoscopes using three mirrors arranged in a prism for each of these. The images in such kaleidoscopes allow us to introduce the idea of plane-filling tessellations generated by reflections. Other configurations of three mirrors can be used to extend these ideas to the symmetries of regular polyhedra. (Received September 16, 2013)