

KINETIC Kaleidocycles

Sharon McKittrick Boyle

Students enter the art studio and see examples of an interesting-looking project on their tables. They pick the objects up and twist the designs. Soon they are asking, "Can we make these, too?"

Students draw the kaleidocycle pattern as a guided practice, using the mathematical technique of labeling line segments. In this way, a teacher can direct the class one line at a time: "Draw a line from point A to point J using your ruler."

For the past ten years, I have taught the kaleidocycle lesson to classes of middle and high school students. This is an excellent opportunity to use peer-teaching techniques, since there are always some students who catch on right away.

Developing a Theme

Brainstorming as a group, students

think of many things that come in sets of four and expand on a theme. Students work out a pattern that progresses as the kinetic form is turned. The seasons are an obvious starting point; add sports and the ideas come fast and furious.

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movement toward a distant object. I explain that measurements are very important, and I mention that if the angles and line segments are not drawn precisely, the sides of the moving art will collide.

Initial Planning

We always draw the layout first and then students brainstorm and draw thumbnails on diamond-shape templates. Students use vellum to transfer



Idea can be abstract, nonobjective, or realistic images drawn in a metamorphic series. Some of my students have chosen to indicate

designs to the final tag board. I stress craft and technique, and I show several methods for connecting the central images.

Completion

Students design, draw, and complete the illustrations before they score the lines and fold the kaleidocycle form. Glue is the last step. Glue the center tabs first and then hold until dry before choosing one of the other tabs to glue. Secure the end tabs last. Do not tumble the form until it has dried overnight. 🌀

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NATIONAL STANDARD

Students synthesize the creative and analytical principles and techniques of the visual arts and selected other arts disciplines, the humanities, or the sciences.

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