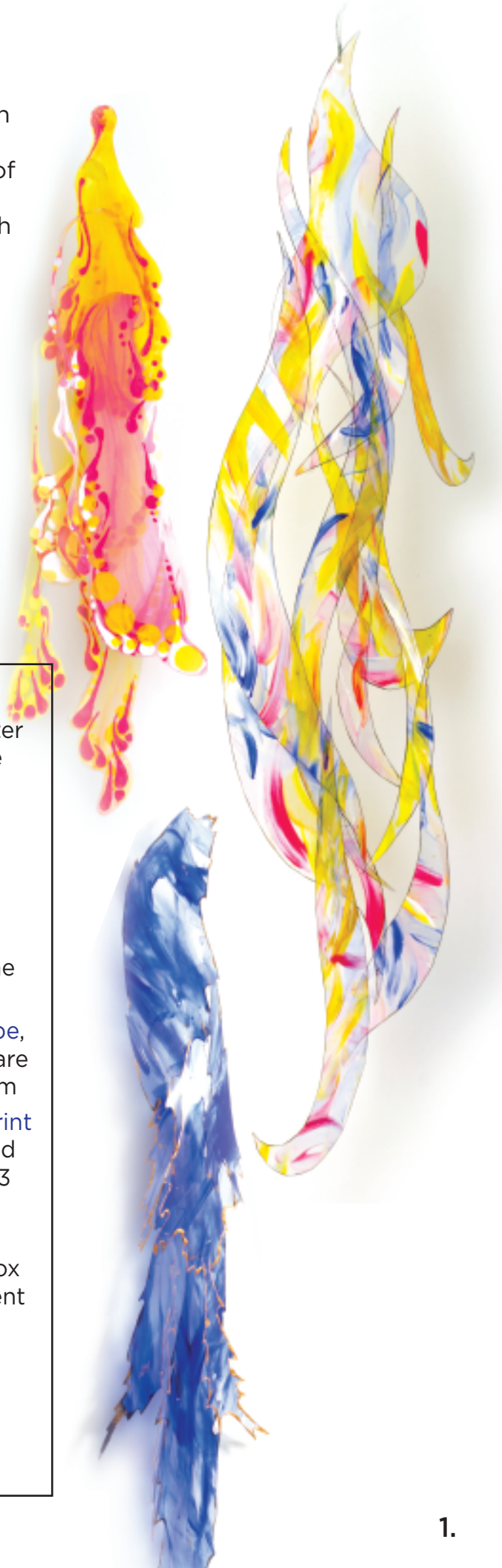
Kinetic Dura-Lar™ Sculpture

Kinetic sculpture is art in motion. Artists in the early 20th century began creating works of art that relied on mechanics or natural forces to move one or more parts of their sculptures. Alexander Calder further popularized kinetic sculpture with his delicate hanging mobiles, which responded to air currents within a room.

This lesson will attract students to the abstract as they create their own hanging kinetic sculptures from lightweight polyester material. Transparent acrylic paint will mix colors as the pieces overlap and opaque paint will cast interesting shadows. These sculptures are created without tape or glue — a simple tab-and-slit connection holds pieces together so that the artwork can be disassembled and rearranged if desired.



Grade Levels 5-12

Note: instructions and materials based on a class of 25 students. Adjust as needed

Materials

Dura-Lar™ Clear Polyester Film, .003″ (55506-), purchase by the sheet or roll. Each student will need a piece 10″ to 12″ in width and 20″ to 25″ in length

Blickrylic Polymer Gloss Medium, (00711-1028), share 1/2 gallon across classroom,

Blickrylic Economy Acrylics, (00711-1039), share one 6-color mixing set across classroom, (selection is important for transparency and maintaining clean colors)

Blick Scholastic Pony Hair Brushes, size 12 rounds (05865-1012) and size 16 brights (05865-1016), one each per student.

Rectangular 6-Well Tray (03068-1006), share one between two students

Paper Punch, 1/4″ diameter hole (58904-1005), share three across classroom

Sharpie® Paint Marker, (22100-2020), Black, medium point One per student

Acme® Junior Student Scissors (57058-1015), one per student

Blick All-Use Masking Tape, 1″ wide (23006-1001), share four rolls across classroom

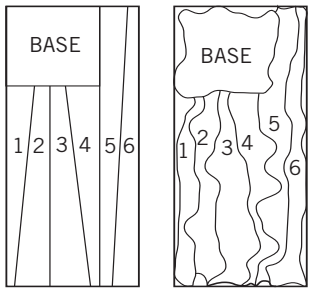
Blick All-Purpose Newsprint (10311-2015), 50-sheet pad 24″ x 36″ sheets, need 1/3 sheet per student

Blick Economy Graphite Pencils (20302-2009), box of 12, need one per student

Process

1. First, prepare preliminary sketches. Visualizing a finished sculpture is difficult, and the finished products usually are not very close to the sketch, but it is important that students have an idea to begin with. Viewing examples, such as the ones on page 1 will be helpful to students as they plan.

   The sculpture will consist of one large piece — the base, to which the other pieces will attach — and any number of vertically-oriented smaller pieces. Use newsprint and pencil to plan a pattern. To avoid waste, have students plan pieces that interlock and touch the edge of the page. The example at right (A) is a basic layout with base and 6 pieces. Example (B) enhances the basic layout with free-form edges.

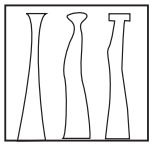


(A)

(B)

Design Hints

– Design the hanging pieces with a smaller end and it will be easier to attach.


(C)

– Depending on the skill level of your class, have them design pieces with a tab end, so that it is slightly larger. Example (C) illustrates some tab options. The tabs will hold the piece securely to the base when assembling sculpture and will offer more dimensional options.

2. To prevent wrinkling and protect fingers and tabletops, have students tape their Dura-Lar on all sides to the tabletop with masking tape before painting. Mix on the surface with a large, soft brush. Students may blend colors or leave visible brushstrokes, but the painting should be abstract — remember, it will be cut apart. Allow to dry.

Painting Hints

– Mix 1 part color with 6 parts gloss medium to make colors (yellow, magenta and blue) transparent.

– Use white and black sparingly — too much opaque paint will not be as effective.

Process, continued

– A thin application is best — thick areas may crack later.

After the sculpture is assembled, you may want to give students the option of adding more paint to the surface. It's better to keep the coverage minimal at the start and then determine where to add.

3. Place the Dura-Lar sheet over the newsprint sketch. Use a Sharpie Paint Marker to trace the sketch onto the painting. Paint markers dry quickly, so there's less smearing, but other permanent markers will also work (waterbased markers will not adhere). Cut the pieces apart, leaving the marker line as part of the piece. The black edge will help define the shape of the pieces.

4. Use the punch to determine a hanging hole in the base. Have students hold the base up in front of them to decide where they would like to hang the first piece off the base. Lay the base back down on the table with the piece positioned on top of it. Using the marker, place a small dot on either side of the hanging piece, then cut a slit between the dots. Insert the hanging piece through the slit.

Assembly Hints

– Some pieces may require slits in more than one location to hold securely.

– Slits may be placed at any angle and on other pieces, not just the base.

– If inserting a "tab" piece (see design hints, first step), tabs can be folded to fit through narrow slits.

– Attach pieces to both the front and the back of the base .

5. Use a wire or clear nylon line through the punched hole to hang. Hang from ceiling or light fixtures where light and air currents are available. Do not place next to a bare bulb or heating vent, or hang in a location with motion-detecting security alarms.

National Standards

Content Standard #1 — Understanding and applying media, techniques and processes

5-8
Students intentionally take advantage of the qualities and characteristics of art media, techniques and processes to enhance communication of their experience and ideas

9-12
Students conceive and create works of visual art that demonstrate an understanding of how the communication of their ideas relates to the media, techniques and processes they use

Content Standard #2 — Using knowledge of structures and functions

5-8
Students generalize about the effects of visual structures and functions and reflect upon these effects in their own work.

9-12
Students create artworks that use organizational principles and functions to solve specific visual arts problems.