



MIXING THE CORNSTARCH SIZE

The following recipe will yield one gallon of stock solution that can be thinned as needed. The size can be made at home the day before the lesson.

MATERIALS:

- Powdered cornstarch
- Mixing bowl
- Stove or hot plate
- Measuring cup
- Water
- Slotted spoon or metal whisk
- Large saucepan

DIRECTIONS:

1. Add 1 cup cornstarch to 1 cup cold water in the mixing bowl.
2. Stir until completely dissolved.
3. Bring 3 quarts water to a rolling boil.
4. Add the boiling water to the cornstarch mixture in the mixing bowl.
5. Stir the mixture with a slotted spoon or metal whisk until thick and smooth.
6. When cool, pour into a gallon jug for storage (milk container works well).
7. Add water to equal 1 gallon (about 2–3 cups). The mixture will thicken as it cools. Add water for correct consistency before using as size.

ry. This method, called *ebru* (cloud art), was similar to *suminagashi*, but used oil-based pigments instead of the water-based *sumi* ink. Additionally, the water was thickened to allow manipulation of the colors and creation of controlled patterns.

The art of marbling spread gradually to Europe and was used extensively in the printing and book-binding trades. From the 16th to the 19th centuries, marbled papers became an indispensable part of almost every book published. Until the first half of the 19th century, marbling was kept a closely guarded secret by those who practiced it.

In 1853, Charles Woolnough, an English marbler, published a book exposing the mysteries of marbling. Rivals rushed to publish other books on the subject and by the end of the 19th century, marbling was a popular and widely practiced art form.

As machines replaced hand binding, however, marbling soon became *passé* and its popularity declined. By the beginning of the 20th century, marbling was nearly a lost art. Nevertheless, marbling, like papermaking and hand-made books, has recently experienced a revival of interest among artists and craftspersons.

Although modern marbling techniques employ acrylic paints thinned

with specialized dispersants and floated on specially prepared water (*size*), the technique is relatively simple. It is an excellent art project for children at any grade level. However, the standard tools and materials required can be expensive. Fortunately, everything needed can be substituted or fabricated from readily available components.

The traditional tools for marbling (trays, whisks, rakes, eyedroppers) combined with the paints and necessary chemistry can stress some art-program budgets. Nevertheless, marbling can be done in any classroom without incurring great expense. The basic ingredients for marbling on a budget are cornstarch and liquid tempera paints. Marbling this way has added advantages. Tempera paints and cornstarch are nontoxic and ideal for use with younger children.

The first step in the process is to collect the necessary tools and materials. Tools include a large, shallow pan (at least two inches deep and larger than the paper), some whisks, eyedroppers and rakes. Whisks and rakes can be made by students (see sidebar). A piece of acrylic or a flat cookie sheet larger than the paper is needed for draining the marbled sheet. As for tempera colors, a limited

see **MARBLING** on page 40