

# Speedball®

## A Botany Lesson with Clay and Underglazes

**Description** - Students will collect leaves and other parts (nuts, etc.) from 5 or 6 different species of trees. These will be pressed into a slab of moist clay and stained with underglaze to delineate the leaf shape and vein pattern.

**Goals** - To explore the ability of clay to record the texture and design of natural elements applied to it. To identify different types of trees (or other plants) by their leaves and to create a record of them by making fossil-like.

### Materials

- Moist earthenware clay rolled into slabs and cut into individual squares or rectangles.
- Speedball Underglazes
- Brushes
- Sponges
- Tools: slab roller or rolling pin, rubber rib, brayer, needle tool or knife
- Leaves, seeds, nuts, berries from various plants
- Reference material such as: plant identification book, poster or a display of leaves identified by the teacher
- Plastic storage bag for each student's leaves

**Step 1** –Collect the items. If necessary, identify any plants to avoid - like poison ivy, blackberry bushes, etc. If there is opportunity in your school yard, go out on a nature hike to collect leaves and other elements; otherwise, have the students bring in examples from home. You may want to limit it to trees, or leave it open to whatever plants they select. Depending on the desired finished product, you may want to have them each collect one leaf or several. (See below for variations on this project).

**Step 2** – Identify each plant by comparing the leaf, seed, berries or whatever else was collected with your reference material. Encourage them to notice as many differences as possible between types: compound or simple, rounded, slender, pointed, palmate, etc. Once identified, place on a piece of paper and write the name. Place them in a plastic bag to prevent drying until they can be pressed into clay.



by Nancy Sowder

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**Step 3** – Take your individual slab of clay and using a rubber rib, smooth away any texture left from the canvas. Arrange the leaves on the clay (most textured side down which will usually mean they will be face up) and press them firmly with your fingers. Roll with a brayer or small rolling pin so that the leaves are pressed into the clay paying special attention to the edges so that the outline will be visible when the leaf is removed. Keep the leaves in place while smoothing away any marks in the surrounding clay. A smooth surface will make the imprints more prominent.

**Step 4** – From this point you can follow one of two methods:

**A** - Either neatly write the names of the plant in the clay beside the leaf imprint and then carefully remove the leaves;

Or **B** - Cut the leaves out with a knife or needle tool (being sure that the stem is not cut too thin) to make individual leaves. If the leaves are cut out, write the identifying tree name on the back (and student name). Once the leaf is removed, make a small hole (for hanging or mounting on a board).

**Step 5** – With either method, allow the slab/leaves to dry slowly and completely before bisque firing to cone 04. Pay special attention to stems which will dry very quickly if not covered and may break off of the leaf.

**Step 6** – Stain with underglazes: apply the chosen color of underglaze to the leaf imprints using a brush. Color may represent the fall color specific to the type of tree or various shades of green. Thin the underglaze with water if desired. Use a damp sponge to wipe off the excess color, leaving the underglaze only in the recessed lines. If your leaves are cut out, you may also want to stain the backs leaving underglaze in the inscribed leaf name. For the most natural look, do not apply a covering glaze, but re-fire so the underglaze will fuse to the clay.

**Variations:** - How many different oak (or maple) trees grow in your area? Collect leaves from as many types of the same species tree as possible and identify each one.

- You may extend the scope of this project by having the students identify various parts of the leaf, and classify their leaf according to shape. The names of several different leaf shapes are shown below.

- Have each student collect only one leaf to press and cut out and stain. Then use all of the clay leaves to make a mobile or wall display.

## Evaluation:

Students will be evaluated on:

- Correctly identifying the leaves (and/or leaf type and parts)
- Impressing into clay
- Composition if applicable
- Use of color and staining technique

**Common leaf shapes:** (there are many others, references are easily found by searching "leaf shapes" on the internet.)

- Lobed – having several points
- Cordate – heart-shaped
- Palmate – divided into many lobes
- Trifoliate – divided into three leaflets
- Digitate – divided into 5 lobes
- Round – circular
- Rhomboid – diamond shaped



Mobile constructed from a limb and cut-out clay leaves

