Duncan

ColorWorks

Triaxial Blends Ceramic Art Lesson Plan

duncan**ceramics**.com

Triaxial Blends - - Ceramic Art Lesson Plan

Grade Level: *K-8*

By Randy Ashenfelter

Introduction:
Ever wonder how new glaze colors are developed, or how two glazes will look when they are mixed together? Testing new glazes is useful to understanding how ceramic materials work. Unlike mixing paints, glazes do not always have reliable results. For instance, if equal parts of red and blue paint are mixed, purple will result. The same is not always true for glazes. Some colorants are stronger than others are and some chemicals will react with others producing an unexpected result or color. Testing glazes is always recommended before using them on your artwork. Using a Triaxial Blend is a good way to quantitatively measure glaze-mixing results. Triaxial Blends are used to test three different ceramic glazes at once using measured percentages of each.

Educational Objectives:
This lesson provides opportunities for students to:
- Learn a method for mixing measured quantities of glazes.
- Explore the possibilities of creating new glaze colors.
- Learn about using percentages in Art.
- Develop “left brain” skills using “right brain” activities.

References:
Ceramics: Shape and Surface by Lana Wilson
The Ceramic Spectrum by Robin Hopper
Glazes and Glazing Techniques by Greg Daly

Teaching Tips:
- Have the students prepare tiles in advance using the clay body that they will be using for other projects so that the colors on the tiles will be more accurate to other work they will be doing.
- Have the students make more tiles than they will need.
- To keep the tiles flat and prevent curling at the edges, lay them between two pieces of drywall. The plaster in the drywall will pull the water out of both sides of the tile evenly and keep it flat.
- BREAK THE RULES!!! Testing is the best time to do things that you normally wouldn’t. Some of the best glazes come from mixing things that should not work. An option would be to blend a Cover Coat®, a Concepts™ color and an EZ Stroke™.

Duncan Materials:

Concepts™ Underglaze for Bisque:
- 6-8oz Concepts™ in 3 different colors

Brushes:
- BR 545- ¾” Flat Translucent

Triaxial Blends - - Ceramic Art Lesson Plan

Miscellaneous Materials:

- Soft clay for making test tiles (21 for each student)
- Disposable eyedroppers (3 for each student)
- Under glaze pencil or china marker
- Disposable plates for mixing glazes.
- Rolling pins to roll out clay for tiles

Step-by-Step:

1. Roll out clay and make 2"x2" tiles approximately ¼" thick.
2. Bisque fire to Cone 04.
3. Number the tiles and mark with the formulas in the chart using the under glaze pencil or china marker.
4. Pour a small amount of each color into the palette and assign a letter to each color, i.e. Yellow = A, Blue = B, Red = C.
5. Using the eyedroppers, measure the proper amounts of each color according to the formula on the back of the tile. 20% = 20 drops, 40% = 40 drops, etc. Do one tile at a time.
6. Thoroughly mix the colors together, making sure they have completely blended.
7. Apply three coats of the new glaze to the top of the tile and allow to dry completely.
8. Make sure the brush is cleaned before starting the next tile.
9. Once the tiles are all dry, fire to cone 06.
10. Lay out tiles in a triangle, with #1 in the first row, #2 and #3 in the second row, #4#5#6 in the third row, and so on to see the results of your glaze mixing experiment.
11. Record the results and keep the information and the tiles for future reference.

Project Closure:

Language Arts connection and project closure

- Write and illustrate a brief description of this project, include detailed descriptions of the materials used and what happened during this project.

National Standards for the Arts:
http://www.ed.gov/pubs/ArtsStandards.html
http://www.mcrel.org/compendium/Standard.asp?SubjectID=13
State Standards:
http://edstandards.org/Standards.html
Or refer to the Dept. of Education for a specific state.

Please visit www.duncanceramics.com, Art Educators tab, Learn tab, to view the standards based Vocabulary and Language Instruction, Art Project Rubric, and Writing Rubric documents.