Organisms
integrated art/science lessons
second grade

Developed by ESD 105
Art Integration Mentor
participants
Heidi Mochel and
Laura Rosenstein

An Educational Service District 105 ArtFusion Art Integration project
This publication is funded by a Professional Development for Arts Educators grant provided by the U. S. Department of Education.
The Art-Science Integration project

Art Integration Mentor Project
The ArtFusion Art Integration Mentors (AIM) project, in collaboration with Allied Arts of Yakima, has provide regional classroom teachers with indepth art integration training. AIM engages classroom teachers in the arts by providing hands-on visual arts experiences that teach them the elements of art and principles of design. Teachers team up with a regional art mentor who assists the teacher in developing and implementing an integrated art lesson to their students. Teachers demonstrate an understanding of the elements of art and principals of design which allows them to instruct students on those skills through integrated arts instruction. Find more information at http://www.artfusion.us.

What is Art Integration?
Arts integration is instruction that integrates content, skills and specific state outcomes from the arts—dance, music, theater, and the visual arts—with other core subject area outcomes. Arts integration occurs when there is a seamless blending of the content and skills of an art form with those of a co-curricular subject. Within the AIM project, art integration involves teachers of non-arts subjects working alongside arts specialists and teaching artists to create collaborative lesson plans that infuse the visual arts into non-arts subjects such as math, science, language arts and social studies. In arts integrated classrooms students score higher on achievement tests and demonstrate an increase in critical thinking skills, self-confidence and retention. Visit our Arts Education Research page for more information.
Lesson Title - Guppies with Asante Adinkra cloth (repetition/pattern)

Authors - Heidi Mochel and Laura Rosenstein

Grade - 2

Art EALRs - 1- The student understands and applies arts knowledge and skills in visual arts

Visual Arts Component - 1.1: Understands and applies arts concepts and vocabulary, 1.2: Develops arts skills and techniques, 2.1: Applies a creative process in the arts

Art GLE - 1.1.1-line, 1.1.3-value, 1.1.6-color, 1.1.7-Principles of design, 2.2.1-Performance & process

Integrated Subject - Social Studies 3

Subject EALR - GEOGRAPHY - The student uses a spatial perspective to make reasoned decisions by applying the concepts of location, region, and movement and demonstrating knowledge of how geographic features and human cultures impact environments.

Visual Art Objective - Pattern-uses the elements of art in planned or random repetitions to enhance surfaces of painting or sculptures. Students will draw a pattern on the body of their guppy. Then create a tail and fins for their guppy

Integrated Subject Objective - Geography/Cultural connection- Asante Adinkra cloth from Ghana

Vocabulary - value, guppy, color, repetition, repeating, pattern, shape, Asante, Adinkra, Ghana, organisms, texture, line, tail, fin, value

Materials - Copy of tail types handout, blackline master of guppy for each student, pencil, extra white paper, glue or tape, scissors, colored pencils http://e0.aqua-fish.net/show.php?h=guppy - pictures of guppies http://www.peteducation.com/article.cfm?c=16+1911+1959&aid=2643 - types of tails

Historical Connection

http://iweb.tntech.edu/cventura/Adinkra.htm - Site that shows process of creating Adinkra cloth

http://www.adinkra.org/htmls/adinkra_index.htm - symbols from Ashanti seen on Adinkra cloths

http://www.adireafricantextiles.com/adinkragallery.htm - Examples of Adinkra cloths
1. Observe and discuss Ashanti Adinkra cloths from Ghana. Guide students to notice patterns and symbols used.

2. Pass out blackline master of guppy body. Instruct students to add an eye on their guppy. Students should color their guppy body first as the pattern will show up better on top of color. Head can be a lighter shade. Students should use a pencil or black colored pencil to create their repeating pattern on the entire guppy body.

3. When students are finished, gather together to look at types of guppy tails and fins. Elicit responses regarding shape, size, number and placement on the body. Discuss types of lines apparent on the tails and fins.

4. Pass out a white piece of paper to each student. Instruct students to draw and cut out fins and tail for their guppy. Instruct students to color their tail so that it shows value (review value scale if needed).

5. When finished, glue on fins and tail.

Possible alternatives/extensions- Make the guppies double sided to hang from the ceiling. Use stamps to make the repeated design on the guppy. Could change the pattern on the guppy to resemble aboriginal art using paint and cotton swabs or pencil erasers.

Assessment Criteria

Did the student use a repeating pattern on the body of the guppy?

Does the tail show a value scale?

Does the guppy have an appropriate number of fins and an appropriate tail type?
**Elements of Art**

The elements of art are the components that artists use to create visual art.

**Line** - The path of a point through space. There are many different types of lines, i.e. thick, thin, short, vertical, horizontal, boken, etc. Contour lines show the edges of an object, either exterior or interior.

**Shape** - Two-dimensional area enclosed by a line: geometric (square, rectangle, star, etc.) and organic (closed curved lines).

**Form** - Three-dimensional object that has height, width and depth, i.e. sphere, cube, prism, cylinder, cone, etc.

**Color** - The visible range of reflected light made up of hue (color name), intensity (brightness or dullness) and value (lightness or darkness).

Tint = color with white, Shade = color with black

**Value** - The lightness or darkness of a line, shape or form.

**Texture** - The perceived surface quality of an artwork, i.e. hatching, cross-hatching, scribbling, stippling, etc.

**Space** - The area around, below, above, and within and artwork; the illusion of depth or space on a flat surface, i.e. overlapping, 1-point perspective, positive and negative space, etc.

Visit the ArtFusion website at www.artfusion.us for more information

---

**Principles of Design**

The principles of design describe how the elements of art listed above can be arranged and organized.

**Repetition and Pattern** - The repeated use of an art element to create a pattern.

**Contrast** - Emphasizing differences in art elements, i.e. light/dark, rough/smooth, etc.

**Emphasis and Dominance** - Emphasizing a focal point or highlighting an art element in a work.

**Variety** - Combining art elements differently to create interest, detail and focus.

**Balance** - The distribution of art elements to provide visual weight in an artwork (symmetrical, asymmetrical and radial)

**Movement/Rhythm** - Creating a sense of direction to move the viewers eye across an artwork.

**Proportion** - The relationship of art elements to the whole artwork and to each other.

**Harmony/Unity** - Emphasizing specific aspects of art elements to unify elements in an artwork.

Visit the ArtFusion website at www.artfusion.us for more information