Motion & Design
integrated art/science lessons
fourth grade

Developed by ESD 105
Art Integration Mentor
participant
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The Art-Science Integration project

Art Integration Mentor Project
The ArtFusion Art Integration Mentors (AIM) project, in collaboration with Allied Arts of Yakima, has provided regional classroom teachers with in-depth 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 principles 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 - Learning About Line With Motion & Design #1

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Grade - 4

Art EALRs - 1- The student understands and applies arts knowledge and skills in visual arts, 3- The student communicates through the 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, 1.1.2-shape & form, 1.1.7-Principles of design, 1.2.1-Skills and Techniques, 2.1.1-Creative process, 2.2.1-Performance & process

Integrated Subject - Science 1- Systems

Subject EALR - Systems thinking makes it possible to analyze and understand complex phenomena. Systems concepts begin with the idea of the part-to-whole relationship in the earliest grades, adding the ideas of systems analysis in middle school and emergent properties, unanticipated consequences, and feedback loops in high school.

Visual Art Objective - Students will learn about the different types of lines and how they relate to the interpretation of what an individual “sees” when they look at an object. Students understand the difference between exterior (outside) and interior (inside) lines and how to use them to depict objects from observation.

Integrated Subject Objective - Students will use contour drawing techniques to create a blind drawing of the K’nex pieces.

Vocabulary - line, thick, thin, curved, light, dark, horizontal, vertical, diagonal, contour, exterior, interior, shape, geometric, organic, blind drawing

Materials - drawing pencils, 11 X 18 white paper, erasers, K’nex pieces, glossary page, classroom objects such as paper clip, roll of tape, marker, etc.

Historical Connection


Pablo Picasso, “Sleeping Woman”, line drawing.

Teaching Procedure

1. This lesson is intended to be used PRIOR to Lesson Two's part where students are to draw the top view and side view of the vehicle their group has designed together.

2. Introduces the concept of LINE including EXTERIOR and INTERIOR contour line. Prompts: A line is a mark made by a pointed tool - such as a brush, pencil, pen, or sticks. It has a beginning and an end. EXTERIOR contour lines define the shape and INTERIOR lines define the details of the object.

3. Pass out GLOSSARY page to students and have them study it for a few minutes. Afterwards, have students identify the kinds of “lines” they see in the classroom, objects in their desks, buildings outside, the playground, etc.

4. Introduce the concept of SHAPE. Prompts: Shapes can be GEOMETRIC (circle, or composed of straight line segments, ex: square, triangle rectangle) Shapes can also be ORGANIC (irregular, similar to those found in nature, ex: plants, animals, rocks). Every shape has an inside and an outside. Have students identify shapes they see in the classroom.

5. Introduce examples of different works of art that include various line qualities and types of shapes. Display Artist's works and have students identify the different kinds of lines and whether they are exterior or interior. Students will also identify the various shapes they observe and explain whether they are geometric or organic and why.

6. Introduces concept of BLIND CONTOUR LINE Drawing. Prompts: Explain the difference between tracing and drawing from observation. Explain that a BLIND CONTOUR DRAWING is a “right-brain” exercise designed to improve observation and drawing skills quickly. Demonstrates BLIND CONTOUR LINE Drawing. Prompts: I am going to draw a paperclip/object of your choice without looking at my paper. I am going to draw it in one long CONTINUOUS line that includes EXTERIOR/outside and INTERIOR/inside LINES—I do this so I don't lose my place and this makes me focus on drawing what I see. I pick a spot to start and I draw the CONTOURS as I observe them and I only draw as fast as my eyes move along the CONTOURS that I am looking at. Imagine that you are a small insect (like an ant) and you are crawling along the EXTERIOR and INTERIOR CONTOUR LINES and your pencil moves in the same way the “ant” does.

7. Now it is your turn. Pass out the 11 X 18 white paper. Have them fold it in half, hamburger style. You will then direct students through a BLIND CONTOUR LINE Drawing of an object such as a pencil or other object of your choice. Prompts: On one side of the paper you are going to draw this pencil/object in one long CONTINUOUS line that includes EXTERIOR and INTERIOR CONTOUR LINES. I am going to be your “eyes.” You will look at the pencil and not at your paper. You will move your pencil in the same way as I point to the EXTERIOR and INTERIOR CONTOUR LINES—if I move the point quickly then you will move your pencil the same way, if I move slowly along a line then you will too, if I move the point across the page then your pencil will move across your page. After completing the drawing, discuss the kinds of lines and shapes they see in the object.

8. Instructs students to create a MODIFIED CONTOUR LINE Drawing. Prompts: Now on the other side of your paper you will do a drawing of your own pencil/object. Again in one CONTINUOUS line that includes EXTERIOR and INTERIOR CONTOUR LINES—but this time you can look back and forth to your pencil and to your drawing, recording what you see. Make your drawing LARGER than an actual sized pencil. You can practice drawing other objects on the back side of your paper as well.

9. Instructs students to draw from observation and to include EXTERIOR and INTERIOR LINES and different SHAPES of their objects. (Pass out more paper to those who need it) Prompts: You and your partner will pick five K’nex pieces from the bag. Using the right side of your paper, you will take turns observing a piece and drawing it larger than its actual size. All 5 shapes should be able to fit on this half of your page. If not, use the back side to complete your assignment. Be sure to include EXTERIOR and INTERIOR LINES, and GEOMETRIC and ORGANIC shapes where they apply to add DETAIL to each of your pieces in your drawings.

Assessment Criteria
1. Links language with LINE
2. Draws an object from observation
3. Draws EXTERIOR and INTERIOR contours that record the details and SHAPE of an object
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 an artwork.

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