

# Soils

integrated art/science lessons

second grade



Developed by ESD 105  
**Art Integration Mentor**  
participants  
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# The The Art-Science Integration project

## **Art Ingetration 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 1

## Root Growth for Soils

**Lesson Title** - Crayon Resist Root Growth Picture for Soils

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**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, 1.1.2-shape & form, 1.1.6-color, 2.1.1-Creative 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.

**Searchable Keywords** - ASI, STC, Soils, roots, plants, worms, crayon resist

**Visual Art Objective** - Create a picture which uses realistic color choices to depict plant growth that shows above and below the soil.

**Integrated Subject Objective** - Represent the parts of plants to show both above the soil and below.

**Vocabulary** - soil, roots, plants, worms, color, line, color wash, red wiggler, outline, crayon resist

**Materials** - watercolors, paintbrushes, blackline master of jar for each student, crayons, water cups

Historical Connection

# Teaching Procedure

1. Observe and discuss growing plants and their root system.
2. Observe the pine seedling drawings from the organism science unit if available.
3. Have students trace the jar template with a dark crayon on white paper.
4. Direct students to draw a soil line  $\frac{1}{3}$  of the way from the bottom of the jar with a brown crayon.
5. With crayons, then have the students draw in plants and flowers, adding roots below the soil line. Have students add red wigglers to the picture below the soil line also.
6. With water colors, have the students add a color wash of brown on the soil.
7. With watercolors, have the students add a color wash of blue in the rest of the jar, add a third color for the jar lid.
8. Color wash a third paper a darker color entirely and allow to dry.
9. When both painted papers are dry, cut out the jar and mount on the solid colored paper.

Variations: Could be used with the freshwater habitat aquariums or woodland habitat terrariums.

## Assessment Criteria

Did the student follow directions?

Does the drawing include plants, roots, and worms?

Scoring Rubric:

- 4 - Student includes plant, roots, worms in the drawing and follows directions.
- 3 - Student includes 3 of the required items
- 2 - Student includes 2 of the required items
- 1 - Student includes 1 of the required items
- 0 - Student does not include any of the required items.

# Project Example



# 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, broken, 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 an 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](http://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 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 viewer's 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.

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