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Designed to extend and enhance the learning experience of our exhibits while linking to core curriculum subject matter.

Lesson Objectives
- To explore how man made things interact with the environment.
- To understand the impact of oil spills on our natural environment.
- To develop an understanding of how to use oil and water colors.

Core Curriculum Tie-Ins
Kindergarten through Fifth Grades: Science, Social Science, and Visual Art.

Lesson Overview
On the ARTS tour, students will learn about the work of Sibylle Szaggars Redford: Summer Rainfall and how artists can bring awareness to environmental issues through art making. This lesson extends that learning and teaches the properties of different art materials to illustrate peoples relationship to the environment.

Length Of Lesson
One to Two Class Sessions.

Supplies
- Water color paper.
- Watercolor brushes.
- Watercolor sets, at least one per every two students.
- Some kind of Vegetable oil, the heavier the better.
- Cups to hold both water and oil.
Core Curriculum Tie-Ins

SCIENCE CORE CURRICULUM (K thru 2nd grade)

Standard 1: The Processes of Science, Communication of Science, and the Nature of Science. Students will be able to apply scientific processes, communicate scientific ideas effectively, and understand the nature of science.

Objective 1: Generating Evidence: Using the processes of scientific investigation (i.e. framing questions, designing investigations, conducting investigations, collecting data, drawing conclusions).
   a. Framing questions: Observe using senses, create a hypothesis, and focus a question that can lead to an investigation.
   b. Designing investigations: Consider reasons that support ideas, identify ways to gather information that could test ideas, design fair tests, share designs with peers for input and refinement.
   c. Conducting investigations: Observe, manipulate, measure, describe.
   d. Collecting data: Deciding what data to collect and how to organize, record, and manipulate the data.
   e. Drawing conclusions: Analyzing data, making conclusions connected to the data or the evidence gathered, identifying limitations or conclusions, identifying future questions to investigate.

SOCIAL STUDIES CORE CURRICULUM (3rd grade)

Standard 1: Students will understand how geography influences community location and development.

Objective 1: Analyze ways cultures use, maintain, and preserve the physical environment.
   d. Compare perspectives of various communities toward the natural environment.
   e. Make inferences about the positive and negative impacts of human-caused change to the physical environment.
Core Curriculum Tie-Ins Continued

VISUAL ART CORE CURRICULUM (3rd thru 6th grade)

Standard 1: (Making) The student will explore and refine the application of media, techniques, and artistic processes.

Objective 1: Explore a variety of art materials while learning new techniques and processes.

Objective 2: Use a broad range of art materials in supporting the visual arts needs at school.

a. Use as many art materials as possible to help decorate the room.

b. Use new art materials and newly learned techniques and processes to celebrate important days and historical events.
About Sibylle Szaggars Redford: Summer Rainfall

Summer Rainfall is the culmination of over five years of collaborating with the monsoon rains of Northern New Mexico, the gentle rains of the Napa Valley and the mountain rains of Utah. The works in this exhibition represent Sibylle’s continuing efforts to expand the vision of this collaboration through the use of various media; from Rain Paintings on watercolor paper, printing onto Silks and creating her Desert Silks, mixed media printing of intense radiant colors, to digital manipulation and photographic expressions laminated between plexi. In addition, you can experience her Rain Art Films on her website (www.sibylleszaggars.com), and here at the Kimball Art Center.

With each interpretation of Original Rain Art, Sibylle has never lost her mission as an Environmental Multimedia Artist in order to raise awareness of our changing climate and weather patterns by presenting something beautiful through this collaboration of Artist and Rainfall.
Lesson Plan

1- Ask students if they know what happens when oil and water mix. Using the resources below, show students examples of what has happened when oil has spilled in the natural environment.

2. Now show students what happens when water and oil mix. Use the science resource below for a sample demonstration. Explain how both water and oil prefer themselves over each other. Pour water in a glass jar and then pour a heavy cooking oil or actual oil into the jar as well. Stir. Notice how the water and oil separates and the oil ends up on top. Explain that the oil is less dense than the water. Ask students how this could make oil clean-up more or less difficult. What kind of animal and plant life is affected by oil spills?

3. Now ask students how could you use oil in artwork Give examples such as oil paint, pastels, and actual oil itself. Look at Brian Borello who has used oil to create artwork about the Deepwater Horizon spill.

4. Now explain to students they will be using oil and watercolor to create their own artwork. Pass out the paper, brushes and cups of oil. If students are younger, it may be helpful to have them draw out:
   four lines, one circle and one square, with a pencil.
Otherwise have students paint each of the above shapes with a brush and oil onto their paper. Let the oil stand for several minutes.

5. While the oil standing show students how to use watercolor brushes. Demonstrate how they must add water before they apply their color to the page.

6- Now have each student pass their project to their partner. Each student can use whatever colors they want to create a picture. Notice how the oil pushes and changes the water color.

7. At the end of the class place the work in an area it can dry. If there is time have students look at each other’s work and ask them how their art is connected to the environment.
Resources

SPILLS:


http://www.cityweekly.net/utah/crude-awakening/Content?oid=3130054


SCIENCE:

http://mocomi.com/why-oil-and-water-dont-mix/

ARTISTS:

Vocabulary

**Density:** The density, or more precisely, the volumetric mass density, of a substance is its mass per unit volume.

**Oil Spill:** An oil spill is the release of a liquid petroleum hydrocarbon into the environment, especially marine areas, due to human activity, and is a form of pollution. The term is usually applied to marine oil spills, where oil is released into the ocean or coastal waters, but spills may also occur on land.

**Shape:** A shape is the external form or appearance characteristic of someone or something; the outline of an area or figure.