MOLLY JACOBS

WATER & POLLUTION

2nd Grade | Mixed Media
**VISUAL ART LESSON PLAN**

**Lesson Title: Water & Pollution**

**Duration and Number of Planned Sessions:** (40-50 mins)

**Grade Level:** 2nd Grade

### ENDURING CONCEPTS & GOALS FOR THE LEARNING SEGMENT

**Central Focus:**

(3-4 sentences describing the Central Focus for the learning segment and meaningful connections to the subject-specific objectives, including: interpreting art, developing works of art/design, and relating art to context.)

Lesson 1: Students will look at artwork from the Haggerty collection and identify some of these pollutants. Students will learn about pollutants and what kind of substances can dissolve in water. Students will conduct an experiment to learn about how water can dissolve certain substances and not others.

Lesson 2: Students will look at an artwork from the Haggerty collection and discuss how the artist depicts a sense of water without realistic rendering. Students will create artwork using science to dissolve pigments in their artwork while thinking about what forces are at work to create this abstract art.

Lesson 3: Students will look at an artwork from the Haggerty collection and discuss what kinds of substances pollute our water. Students will complete a worksheet about the different kinds of pollutants. Students will create an artwork using collage to display the types of pollutants we see in our world.

**Key Concept:**

What is pollution and how does it affect water?

**Essential Questions:**
- What pollutes our water?
- How do people use water?
- How do we keep our water clean?

### LEARNING OBJECTIVES & VISUAL ART STANDARDS

**National Visual Art Standards Supported (Number & Text)**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Objective</th>
<th>Learning Objectives</th>
<th>Learning Tasks &amp; Assessment Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd grade</td>
<td>VA:Re.7.1.2a</td>
<td>Interpreting Art: Students will describe the artworks shown and interpret how they depict water.</td>
<td>Learning Tasks: Students will explore how objects mix through an activity. Feedback: Worksheet Discussion</td>
</tr>
<tr>
<td>2nd grade</td>
<td>VA:Cr1.2.2a</td>
<td>Developing Works of Art/Design: Students will create works of art using various materials to explore representations of pollution. Students will explore the use of potentially new concepts like collage and color mixing.</td>
<td>Learning Tasks: Students will create art using markers and coffee filters as well as collage techniques, to create an expression of how they interpret pollution. Feedback: Artmaking Discussion</td>
</tr>
<tr>
<td>2nd grade VA:Cn11.1.2a</td>
<td>Relating Art to Context:</td>
<td>Learning Tasks:</td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------------</td>
<td>-----------------</td>
<td></td>
</tr>
<tr>
<td>Compare and contrast cultural uses of artwork from different times and places.</td>
<td>Students will compare works of art depicting water from around the world and interpret how water is used and abused in different ways.</td>
<td>Students compare an artwork from the Haggerty depicting different places around the world to talk about the pollution of our water.</td>
<td></td>
</tr>
</tbody>
</table>

**Feedback:** Discussion

### ACADEMIC LANGUAGE

<table>
<thead>
<tr>
<th>Language Demands</th>
<th>Planned Supports</th>
<th>Evidence of Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Describe language demands that are essential to this learning segment)</td>
<td>(Instructional strategies, learning tasks, &amp; materials)</td>
<td></td>
</tr>
</tbody>
</table>

**Language Function:**
Educate, expand awareness and understanding, encourage application

**Vocabulary:** (list & define)
- **Pollution/Pollutant:** something introduced to the environment that is dirty, unclean, or has harmful effects
- **Dissolve:** to become or cause to become incorporated into a liquid to form a solution
- **Solution:** a liquid mixture in which the minor component (the solute) is uniformly distributed within the major component (the solvent)
- **Soluble:** able to be dissolved, especially in water
- **Substance:** synonyms: object, item
- **Collage:** a piece of art made by sticking various different materials such as photographs and pieces of paper or fabric onto a backing

**Evidence of Learning**
Students can put the language to use when reading questions and following the activity. Students will explore the potentially new media through artmaking.

**Worksheet**
Discussion
Exploration of materials/artmaking

**Discourse (or Syntax):**

1. Students can put the language to use when reading questions and following the activity.
2. Students will explore the potentially new media through artmaking.
### Lesson Description:
Students will look at *Swamp and Pipeline, Giesmart, Louisiana, 1938*, and discuss what pollution is and how substances dissolve in water. Next, students will take part in a mixing activity to learn hands-on how substances can dissolve in water.

### Planning:

#### Room Setup:
- sink
- desk/table space to work

#### Materials:
- plastic cups
- water
- sugar
- salt
- sand
- vegetable oil
- glitter
- popsicle sticks (for mixing)
- strainer
- worksheet
- writing utensil

#### Prep:
- n/a

### Instructional Strategies & Learning Tasks
Chronological description of teacher and student activities and learning tasks for this lesson, including review, motivation/introduction, looking and talking about art, demonstration, studio practice and artmaking, and closure activities.

<table>
<thead>
<tr>
<th>Time</th>
<th>Teacher Activities</th>
<th>Student Activities</th>
<th>Differentiation/Adaptation &amp; theory that supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Pull up <em>Swamp and Pipeline</em>. Lead a discussion on the artwork and to introduce pollution. What kinds of pollution do you see in this image? What kinds of things dissolve in water? Write down answers to questions on the board.</td>
<td>Listen and respond.</td>
<td>Powerpoint and printed images provided, along with verbal and written questions</td>
</tr>
<tr>
<td>25</td>
<td>Introduce mixing activity. Remind students to be mindful of their surroundings and be careful not to spill materials. Students will each have a clean, water-filled cup, as well as various cups of shared materials they can try mixing into their solutions. As they work, students should record how well substances mix together as well as draw a picture of how the water changes with the addition of each subject.</td>
<td>Complete worksheet as they experiment with the different mixing activities in their cups. Students should be mindful of the aesthetic qualities and changes they see in their mixtures.</td>
<td>Children with sensitivities may skip a mixing substance or wear gloves.</td>
</tr>
<tr>
<td></td>
<td>Have students dump all of their mixtures in a big bucket. Ask them: should we pour the mixture straight into the sink? What will happen if we do? Can we attempt to clean this mess in a better way?</td>
<td>Clean up! Listen and assist.</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ask helpers to pour mixture carefully through a strainer over the sink, allowing the water to flow through. Dump the remaining waste into the trash.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Continue to lead a discussion with the class about their mixing activity. What dissolved? What didn’t?</td>
<td>Discuss their findings.</td>
<td></td>
</tr>
</tbody>
</table>

**Scaffolding recommendations:** (How to adapt this lesson for older students? How to adapt for younger students?)

**Planned Feedback**
Successful completion of worksheet and participation in discussion.

For continuation of project: Teachers can run a lesson creating mindfulness jars. During the lesson, students can hypothesize what items they think will sink versus float, how fast items will fall, and how the substances will mix with each other.

### DAY #2 (40-50 mins)

**Lesson Description:**
In this lesson, students will look at *Blue* and interpret the artist’s depiction of water. Students will then use markers, water, and coffee filters to create backgrounds for their work.

**Planning:**

**Room Setup:**
- table/desk space to work
- space to store/hang wet artworks

**Materials:**
(Instructional, artmaking, and organizational materials required for this lesson)
- washable markers
- permanent markers
- water
- spray bottles
- coffee filters
- rag for cleaning

**Prep:**
- n/a

**Instructional Strategies & Learning Tasks**
Chronological description of teacher and student activities and learning tasks for this lesson, including review, motivation/introduction, looking and talking about art, demonstration, studio practice and artmaking, and closure activities.
<table>
<thead>
<tr>
<th>Time</th>
<th>Teacher Activities</th>
<th>Student Activities</th>
<th>Differentiation/Adaptation and theory that supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Introduce the painting Blue. How does the artist depict water? What media did she use? How does she layer her work? How does she depict movement? What colors does she use?</td>
<td>Listen and participate.</td>
<td>Powerpoint and printed images provided, along with verbal and written questions</td>
</tr>
<tr>
<td>25</td>
<td>Demonstrate how to create the backgrounds for their artworks by coloring with the washable and permanent markers on the coffee filter. Washable markers will bleed and blend, while permanent markers will not. Remind students that they must walk their artwork to the spraying station when they are ready to make their colors dissolve. When finished spraying, students must give their spot a quick wipe down with available rag so that it is clean and dry for the next artist. Remind students that the more water they spray, the more their colors will bleed together. However, after a certain point you don’t need to spray anymore as the filter will be saturated. Also mention that if you tilt the paper in a certain direction as it dries, the colors will run.</td>
<td>Students will create 2+ potential backgrounds as they experiment with colors and technique. When ready to spray/mix/dissolve their colors, students must walk their artwork over to the spraying station (NOT spray at their tables) and wipe down after use.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Remind students to put caps on markers and wipe the table clean if there is water residue.</td>
<td>Clean up! Leave artworks to dry in designated area.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Gallery Walk. Tell students as they leave that next class will be focused on pollution. Have students research some major events surrounding the pollution of water and bring some printed images about that event to the next class.</td>
<td>Gallery walk as the artwork dries to the side. Homework: water pollution images.</td>
<td></td>
</tr>
</tbody>
</table>

Scaffolding recommendations: (How to adapt this lesson for older students? How to adapt for younger students?)

Planned Feedback
Informal feedback in the form of discussion

Additional resources (websites, articles, links, etc.)
**DAY #3 (40-50 mins)**

**Lesson Description:**

Students will look at SOCAR Oil Field and discuss what kinds of pollutants there are in today's world. Students will then work on a worksheet about the different kinds of pollution, and use collage to create their own interpretation of pollution.

**Planning:**

**Room Setup:**

- desk/table space to work

**Materials:**

(Instructional, artmaking, and organizational materials required for this lesson)

- worksheet
- writing utensil
- pre-cut images of various pollutants in multiples
- gluesticks
- coffee filter art

**Prep:**

- some pre-cut images of different types of water pollution

**Instructional Strategies & Learning Tasks**

Chronological description of teacher and student activities and learning tasks for this lesson, including review, motivation/introduction, looking and talking about art, demonstration, studio practice and artmaking, and closure activities.

<table>
<thead>
<tr>
<th>Time</th>
<th>Teacher Activities</th>
<th>Student Activities</th>
<th>Differentiation/Adaptations and theory that supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Introduce the image SOCAR Oil Field. What is being shown here? Have you heard of any other oil spills? What does oil do? What kinds of things pollute our water?</td>
<td>Listen and participate.</td>
<td>Powerpoint and printed images provided, along with verbal and written questions</td>
</tr>
<tr>
<td>10</td>
<td>Hand out worksheets.</td>
<td>Work with a partner on the worksheet about different kinds of pollutants. Think of at least 5 different examples.</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Introduce activity. Students must collect a variety of images based around the different types of pollutants there are. After they collect their interpretations of pollution, students can glue images onto their watercolor backgrounds. Make sure to show some examples of collage techniques. Advise students to think about ways we can make this art into a more political stance. If applicable, students can find and collect various images about pollutants. Arrange and glue onto their favorite background. If they finish one filter quickly, students may choose to work on another coffee filter as well.</td>
<td></td>
<td>A variety of pre-cut images and not will be provided for students to pull from for their projects.</td>
</tr>
</tbody>
</table>
research on chromebooks or phones about different types of pollution or a major event involving water. This could be something such as the BP Florida Gulf oil spill, President(s) Obama and Trump’s actions surrounding the Pipeline stretching from Alaska down towards the Gulf, the melting of the ice caps, or a variety of other events. Students may choose to print some images if they want.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Remind students to put caps on glue sticks and to close/wipe the glue bottles, as well as to throw away paper scraps.</td>
<td>Clean up</td>
</tr>
<tr>
<td>5</td>
<td>Divide students into small groups.</td>
<td>Share your artwork in small groups.</td>
</tr>
</tbody>
</table>

**Scaffolding recommendations:** (How to adapt this lesson for older students? How to adapt for younger students?)

**Planned Feedback**
worksheets and multiple discussions with the group
LET'S TALK POLLUTION!

CH3 Water & Pollution

There are a lot of different types of pollution. We're going to collect images for a collage we're going to create. As you work, try to categorize your images into the different kinds of pollution. Here's a cheat sheet on just a few of the different types.

**Nonpoint Source Pollution**
Pollution from many sources diffused together. Ex: land runoff or precipitation

**Point Source Pollution**
Pollution with a single identifiable source. Ex: a drainage pipe

**Blackwater**
Wastewater from toilets.

**Greywater**
Relatively clean wastewater from baths, sinks, kitchen appliances.

**Oil Spillage**

**Transboundary Pollution**
Pollution that crosses from hundreds of miles away, often through water or air

**Nuclear Waste**

**Microbiological (bacteria)**

**Excess Plant Nutrients**

Want to learn more? Go to www.safewater.org
M&M POLLUTION SHEET

CH3 Water & Pollution

Complete the chart with your observations. On the left, draw a picture of what you think will happen to the M&Ms on your plate. On the right, record your observations. Use illustrations and words to help you!

5 min:

10 min:

20 min:

25 min:

What kind of pollution do you think the M&Ms are creating?
Circle your answer!

Blackwater          Greywater         Whitewater
Swamp and Pipeline, Giesmar, Louisiana, 1938
Richard Misrach, 1998
Lesson Overview:

Lesson 1: Students will look at artwork from the Haggerty collection and identify some of these pollutants. Students will learn about pollutants and what kind of substances can dissolve in water. Students will conduct an experiment to learn about how water can dissolve certain substances and not others.

Lesson 2: Students will look at an artwork from the Haggerty collection and discuss how the artist depicts a sense of water without realistic rendering. Students will create artwork using science to dissolve pigments in their artwork while thinking about what forces are at work to create this abstract art.

Lesson 3: Students will look at an artwork from the Haggerty collection and discuss what kinds of substances pollute our water. Students will complete a worksheet about the different kinds of pollutants. Students will create an artwork using collage to display the types of pollutants we see in our world and in contemporary events.

Lesson 1:

Students will look at Swamp and Pipeline, Giesmart, Louisiana, 1938, and discuss what pollution is and how substances dissolve in water. Next, students will take part in a mixing activity to learn hands-on how substances can dissolve in water. Students will also curate a collection of images related to pollution, categorizing them on different types and forms that pollution can take, to be used in a larger project in a later lesson.

Planning:

Room Setup:
- tables for students to work on paper assignment and desk experiment
- sink
- place to store envelopes of art images for next day’s work

Materials:
- worksheet
- writing utensil
- plastic/styrofoam plates
- water
- plastic cups
- M&Ms/Gobstoppers/Skittles
- colored markers
- strainer
- timer
- paper
- tape
• scissors
• if available: chromebooks and printer
• sponge
• variety magazines for cutting, collecting images
• projector/smartboard

Prep:
• some pre-cut images of a variety of types of water pollution

**Lesson 2:**

In this lesson, students will look at *Blue* and interpret the artist’s depiction of water. Students will then use watercolors to create backgrounds for their work.

**Planning:**

**Room Setup:**
• table/desk space for working
• space to store watercolors to dry

**Materials:**
(Instructional, artmaking, and organizational materials required for this lesson)

• watercolors
• cups
• brushes
• Frisket
• salt
• watercolor pencils
• watercolor / aqua pen
• straws

Prep:
• water cups

**Lesson 3:**

Students will look at SOCAR Oil Field and discuss what kinds of pollutants there are in today's world. Students will then work on a worksheet about the different kinds of pollution, and use collage to create their own interpretation of pollution. Next, students will create a collage about pollution using a curated set of images.

**Planning:**

**Room Setup:**
• table/desk space to work on project
• place to store finished projects

**Materials:**
(Instructional, artmaking, and organizational materials required for this lesson)
- worksheet
- writing utensil
- pre-cut images of various pollutants in multiples
- modge podge (matte and glossy)
- watercolor backgrounds
- mylar sheets
- tape
- scissors
- miscellaneous waste items: straws, clean wrappers, etc.

**Prep:**
- have envelopes of gathered pollution images ready
- have watercolor backgrounds ready
Blue
Pat Steir, 2004
SOCAR Oil Field 1 a&b
Edward Burtynsky, 2006