

Title: *Water Threats Around the World Affect More Than Just Water*

Study Guide Theme: Water

Featured Photos



Seal In Net



Trash Wave



Man Washing

Overview: In this lesson students will learn and understand that people have contributed to water pollution around the world. They will also understand that mans' waste can end up in the Earth's water systems (oceans, lakes and streams) and is a threat to both human and animal life.

Grade level(s): 5th

Subject(s): Science, Literacy

Corresponding National Standards:

Common Core Literacy Standards:

[5th grade reading: RI. 5.3, 5.4, 5.5, 5.7](#) [5th grade writing: 5.1, 5.2 A-E, 5.7, 5.8](#)

[5th grade speaking and listening: 5.1, A-D, 5.2, 5.4](#)

National Generation Science Standards:

[5-LS.2-1-: Ecosystems, Interactions, Energy, and Dynamics](#)

[ESS5-2.2: Earth Systems](#)

Corresponding Global Competency Skills:

1-Investigate the World

Globally competent students are aware, curious, and interested in learning about the world and how it works.

2-Recognize Perspectives

Globally competent students recognize that they have a particular perspective, and that others may or may not share it.

3-Communicate Ideas

Globally competent students can effectively communicate, verbally and non-verbally, with diverse audiences.

4-Take Action

Globally competent students have the skills and knowledge to not just learn about the world, but also to make a difference in the world.

(<https://asiasociety.org/education/what-global-competence>)

Specific Learning Targets:

Students will:

Understand that humans are responsible for water threats that contribute to water pollution.

Utilize information from three different text sources (book, on-line passages and photographs) and analyze the information from these sources to compare, contrast, predict and summarize.

Answer questions to show comprehension of a text.

Utilize a graphic organizer to analyze and gather text evidence.

Research and site evidences that support an argument/advertisement to make informative decisions.

Essential Question(s):

What is a threat?

What are some threats that affect our oceans, rivers, streams?

How does waste end up in our water systems?

What happens when waste ends up in the water?

As a global citizen how can you take an active role to better our water systems?

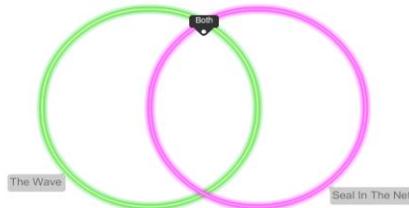
Specific Strategies and Activities by Grade Level:

Day 1- 30 to 45 minutes

The teacher will write on the board **Water Threats** and ask the students to think about the topic for a few minutes and then respond by completing a 2- minute Quick Write. (students write what they know about the topic silently for the assigned time) The teacher will then ask students to share by reading their responses. She will then ask the students from the writings you have heard can you answer the question- What is a water threat? Teacher list student answers on the board.

The teacher will hang the posters (**Seal in Net, Trash Wave and Man Washing**) at the front of the room. The teacher will ask the students to look at each poster and find what threats are apparent in the pictures? Students will choose two of the photos to record their answers on a Venn Diagram. After completing the task the students will pair up to then share their diagrams and make comparisons.

Groups of students will be asked to share their findings to answer the question?



http://www.readwritethink.org/files/resources/interactives/venn_diagrams/

Day 2- 30-45 minutes

The teacher will revisit the EQ from day 1 – (What is a water threat?) and review information discovered from the photos. The essential questions for the day will be-How does waste end up in our water system? What happens when waste ends up in the water?

The teacher will then project a Scholastic article entitled **Floating Junkyard**.

<http://teacher.scholastic.com/scholasticnews/magazines/scienceworld/pdfs/SW-041910-PLASTIC.pdf>

The teacher will draw the students' attention to the photo in the article and ask them what they notice about it? (the article photo is the same as Seal In Net photo) Before reading the article, key terminology will need to be addressed. (if the article can be printed for each student have them read silently and underline key terms.) If students have a 1 to 1 device, the link to the article can be shared. The teacher can project the article on the front board and read it orally to the students if other options are not available.

After reading, the teacher will discuss the vocabulary and definitions with students and then ask questions about the article to assess student understanding.

Questions that may be asked:

What is the title of this article?

What do you think the title says about the article?

Does the picture give you any clues to what the theme of this article is?

What kind of water threat is discussed in this article?

Where was the floating junkyard located?

How many tons of waste are in this patch?

Why is this patch of waste deadly?

Are there more junkyards in the Earth's oceans? Where?

How are scientists trying to stop this toxic threat?

Day 3- 30 to 45 minutes

Photo analysis:

The teacher will give each student a copy of [Photo Analysis template \(see corresponding document\)](#) and explain that they are to answer the questions on the template comparing the two of the photos in the center. Students will share answers during a discussion at the end of class.

1. Describe similarities and differences of the photos.
2. Explain why and how changes have taken place.
3. Predict what changes may occur with these areas in the future.
4. Explain the prediction you made. What would make you change your prediction?

The teacher will assess the photo analysis worksheet turned by each student.

The teacher can choose two of the three photos to be compared in the center of the template.

Learning extension activity:

The teacher will assign students in teams of 3 to 4 students, each team will be given an environmental organization that works for the cause of cleaning oceans/water ways. Each team will research their organization and write an advertisement to sell their organization to their classmates on why it is the best one for the class to join and take action in helping to keep oceans and waterways clean.

<https://oceanconservancy.org/about/>

<https://oceana.org/>

<https://www.surfrider.org/>

<https://4ocean.com/>

<https://www.take3.org/>

The teacher will use a project rubric to grade the advertisement.

See corresponding Rubric document.

Materials:

Venn Diagram handout, Posters- [Seal In Net](#), [The Wave](#) and [Man Washing](#), Scholastic article- [Floating Junkyard](#), Picture Comparison handout, List of Organizations for research, technology- laptops, projector.

Bibliography:

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