

Brandon Valley School District  
District Learning Plan  
March 30 - April 3, 2020

Grade 5 Science



## Brandon Valley School District Distance Learning Plan

LESSON/UNIT: Human Impact/Pollution

SUBJECT/GRADE: Science/5th

DATES: March 30 - April 3

<p>What do students need to do?</p> <p><a href="#">Link to BV instructional video for week of March 30 - April 3, 2020</a></p>	<p><b>Monday (3/30):</b> Read Oil Spill article, "25 Years Later, Exxon Valdez Oil Spill Lingers." Answer the four questions that correspond with the article.</p> <p><b>Tuesday (3/31)-Wednesday (4/1):</b> Complete the <b>Oil Spill Question</b> Handout. Start by answering several questions about the article "25 Years Later, Exxon Valdez oil Spill Lingers." Then complete the Spheres of Earth Drawing activity. They will read about the 4 spheres of Earth: Geosphere, Hydrosphere, Atmosphere, and Biosphere. They will then draw and explain how two of the spheres are impacted by an oil spill.</p> <p><b>Thursday (4/2):</b> Read the handout "Destruction of Habitats" and complete the five comprehension questions.</p> <p><b>Friday (4/3):</b> Read the handout, "Endangered Species" and complete the 5 comprehension question.</p>
<p>What do students need to bring back to school?</p>	<p>Return the <b>Oil Spill Question Handout</b> AND the <b>Endangered Species article and questions</b>. *You can electronically submit them to your science teacher or deliver them to BVIS.</p>
<p>What standards do the lessons cover?</p>	<p>5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.</p>
<p>What materials do students need? What extra resources can students use?</p>	<p>*They need: Oil Spill article, "25 Years Later, Exxon Valdez Oil Spill Lingers/questions, Oil Spill Question handout, Destruction of Habitats handout, and Endangered Species Handout.</p>
<p>What can students do if they finish early?</p>	<ul style="list-style-type: none"> <li>Go to Mysteryscience.com and watch Mystery Science Videos</li> <li>Practice test for the Science AIR test: <a href="https://sd.portal.airast.org/training-tests.shtml">https://sd.portal.airast.org/training-tests.shtml</a></li> </ul>
<p>Who can we contact if we have questions?</p>	<p><b>Brandon Valley Intermediate School</b>  <b>Principal-</b> Mr. Skibsted- <a href="mailto:Nick.Skibsted@k12.sd.us">Nick.Skibsted@k12.sd.us</a>  <b>Assistant Principal-</b> Mr. Pearson- <a href="mailto:Rick.Pearson@k12.sd.us">Rick.Pearson@k12.sd.us</a>  <b>Science Teachers:</b>            Mrs. Sershen- <a href="mailto:gina.sershen@k12.sd.us">gina.sershen@k12.sd.us</a> (red team)            Mr. Stroh- <a href="mailto:nick.stroh@k12.sd.us">nick.stroh@k12.sd.us</a> (white team)            Mr. Metzger- <a href="mailto:tyson.metzger@k12.sd.us">tyson.metzger@k12.sd.us</a> (blue team)            Mr. Wiese- <a href="mailto:alex.wiese@k12.sd.us">alex.wiese@k12.sd.us</a> (silver team)</p>
<p><b>Notes: Have a great week!</b></p>	

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***Instructional materials are posted below (if applicable)***

*Brandon Valley School District*

# 25 years later, Exxon Valdez oil spill lingers

By McClatchy Washington Bureau, adapted by Newsela staff on 03.27.14

Word Count 777

Level 930L



Exxon Valdez oil spill workers recover and clean birds soiled by crude oil spilled when the tanker ran aground in Prince William Sound, Alaska, on April 6, 1989. Bob Hallinen/Anchorage Daily News/MCT

WASHINGTON — Andy Wills was laying on a friend’s couch in Cordova, Alaska, on March 24, 1989. He was up early, ready to head out and fish for herring in Prince William Sound.

“My buddy had just handed me a cup of coffee in the morning and we’re watching ‘Good Morning America,’” Wills said. “And there’s the Exxon Valdez on TV, spilling oil.”

He added, “We were like, ‘No!’ It was just the start of a nightmare.”

The herring of Prince William Sound still have not recovered. Neither have killer whales, and legal issues remain unresolved a quarter of a century later. Monday marked the day when the disaster struck, 25 years ago. On that day, the tanker Exxon Valdez struck a reef and spilled at least 11 million gallons of oil into the waters of the sound. At the time, it was the nation’s largest oil spill.

## Recovery Open To Debate

Prince William Sound today looks breathtaking. It's a stunning setting of cliffs, blue-green waters and thickly forested islands. Pick up a stone on a rocky beach, maybe dig a little, though, and it is

possible to still find pockets of oil.

“I think the big surprise for all of us who have worked on this thing for the last 25 years has been the continued presence of relatively fresh oil,” said Gary Shigenaka. He's a marine scientist with the National Oceanic and Atmospheric Administration.

The question of how well Prince William Sound has recovered is open to debate. Exxon Mobil Corp. says studies show the area is bouncing back. Exxon Mobil is the company that was shipping oil inside the Valdez.

The area where the spill happened is doing very well and there has been "a very solid, complete recovery," said Richard Keil, a spokesman for Exxon Mobil.

Government scientists have a different view.

The Exxon Valdez Oil Spill Trustee Council is a group set up to make sure the Prince William Sound returns to its normal environment. It considers the numbers of pink and sockeye salmon to be back to normal. Bald eagles and harbor seals have also bounced back. Several other species are listed as recovering but not recovered.

### **"People Got Real Hurt"**

Sea otters have had a rough time. Thousands died in the months following the spill, and the population has struggled to recover in the 25 years since. The U.S. government reported earlier this month that the sea otters of the area had finally returned to their pre-spill numbers.

Still not recovering are the herring, a group of killer whales and a type of seabird.

Wills, who fished salmon as well as herring, said the spill left a huge mark on those who made a living from Prince William Sound.

Exxon gave money to pay people for losses, but checks were too late and too little, he said.

“A lot of people got real hurt. I got divorced. It was rough,” said Wills, who now runs a bookshop and cafe in Alaska.

Among the scientific puzzles of the spill, the fate of the herring is a particular mystery. It's an essential species for the ecosystem. Whales, salmon and birds all feed on it.

### **Herring Never Recovered**

Prince William Sound was home to a moneymaking spring herring fishery. It helped fishermen who were badly in need of cash in between fishing seasons.

Scientists found physical abnormalities in herring exposed to the oil. Then, four years after the spill, the herring population crashed dramatically. The reasons are a subject of intense debate. Suggestions have been made that the effects of the spill could have made the herring weak against disease.

The herring never really recovered, and herring fishing has been closed for most of the last 20 years.

The killer whales of Prince William Sound also have suffered. Two groups were hit especially hard. Scientists saw killer whales from one of the groups swimming through oil floating on the ocean surface. A Los Angeles Times photo showed whales from the other group swimming near the tanker as it gushed oil. Populations dropped dramatically in the year after the spill.

One of the groups continues to slowly recover. The other numbered 22 killer whales at the time of the spill and is down to just seven. Scientists now expect it to go extinct. If so, it would be the end of a whale line that has hunted in the area for thousands of years, maybe since the last ice age.

The federal and state governments are still weighing the science of the spill's effects. Court cases will decide whether to seek more money from Exxon Mobil for cleaning up remaining oil.

## Quiz

- 1 Which of the following sentences BEST describes how the article introduces and portrays Andy Wills?
- (A) The article tells his personal story to show how the oil spill affected the lives of locals.
  - (B) The article tells his personal story to show how the oil spill affected the well-being of wildlife.
  - (C) The article shares his opinions and criticism of the oil spill to show how the oil spill affected the lives of locals.
  - (D) The article shares his opinions and criticism of the oil spill to show how the oil spill affected the well-being of wildlife.

- 2 Read the sentences from the article.

*The area where the spill happened is doing very well and there has been "a very solid, complete recovery," said Richard Keil, a spokesman for Exxon Mobil.*

*Government scientists have a different view.*

How does the article's author address the conflicting points of view between Exxon Mobil and government scientists?

- (A) by listing the effects of the oil spill
- (B) by giving examples of sea life that has or has not recovered
- (C) by describing the changes to the local environment
- (D) by predicting how the oil spill will continue to affect sea life

- 3 Read the sentence from the article.

*He's a marine scientist with the National Oceanic and Atmospheric Administration.*

Which of the following words can replace "marine" without changing the meaning of the above sentence?

- (A) military
- (B) animal
- (C) oceanic
- (D) soldier

- 4 Read the sentence from the article.

*Among the scientific puzzles of the spill, the fate of the herring is a particular mystery.*

Which of the following sentences has the same basic meaning as the sentence above?

- (A) Among the scientific games of the spill, the fate of the herring is a special problem.
- (B) Among the scientific questions of the spill, the fate of the herring is a particular problem.
- (C) Among the scientific problems of the spill, the origin of the herring is a special finding.
- (D) Among the scientific amazements of the spill, the origin of the herring is a particular mystery.

## Oil Spill Questions

Names: \_\_\_\_\_

\*Read the attached article on the Exxon Valdez Oil Spill. Answer the following questions.

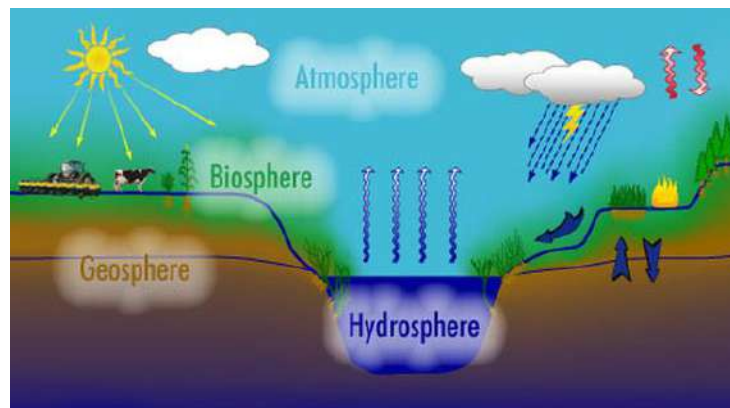
1. When and where did this oil spill take place?
2. How much oil was spilled?
3. Name several animals who are still trying to recover from this oil spill.
4. Describe in detail what happened to the population of killer whales and why.
5. There are court cases deciding if Exxon will have to pay more for clean up. Describe why they may need to pay more even though the spill occurred so many years ago.

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## Earth's Spheres Review

~Earlier this year we learned about Earth's spheres, here's a little review.

**Review Info:** The spheres are the four systems that make up the planet Earth. The four spheres are the geosphere (all the rock/landforms on Earth), hydrosphere (all the water on Earth), atmosphere (all the gases surrounding Earth), and biosphere (all the living things on Earth). The Earth's spheres are always interacting. For example, during a flood the hydrosphere (water) is impacting the biosphere (living things) and geosphere (the land).



Questions:



1. What are Earth's 4 spheres?

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2. Explain what spheres are impacted during an oil spill below.

**\*Draw (and label) how at least two spheres are interacting during this oil spill crisis. Also explain in detail how the two spheres are impacted!**



**How are the spheres impacted by an oil spill?**



## The Destruction of Habitats

The leading cause of plants and animals becoming endangered is humans. When an animal is considered endangered, its population has so few numbers that the species may die out. The only way to save these species is for humans to do something that will protect the species.

The destruction of plants and animals' habitat is the first thing that negatively impacts their populations. This happens when humans need land for things like housing, farming, or growth of cities. When there is an area of land that humans want to use, they don't notice what is already living there. Because of this habitat loss, many plants and animals become threatened or endangered.

One example of this is happening in the tropical rainforest. Thousands of acres of tropical forest, or rainforest have been destroyed by humans. There are about 78 million acres of rainforest cut down every year. People want the land and lumber for building projects. Millions of plants and animals are lost in this habitat every year. Many of the animals that live in the rainforest do not live anywhere else. We are also starting to discover medicines and other resources there.

When a town expands, more businesses and houses are built. The town pushes the local wildlife away from its natural habitat. Grasslands and wetlands are special habitats that are especially at risk. People are becoming more aware of the problem of destroying these habitats and are starting to do something about it. This is the first step towards protecting habitats.

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### Questions:

1. Explain why humans are the leading cause of animals becoming endangered?
2. Name three reasons that humans destroy habitats.
3. Explain what is happening to the tropical rainforests.
4. How many acres of the tropical rainforest are being cut down a year? What do you think about that?
5. Give one fact about habitat destruction and one opinion.

FACT	OPINION

## Endangered Species

Some animals today are considered endangered species, which means there are very few animals of that kind left on Earth. If nothing is done to help these animals, they face extinction. Extinction is when all the animals of one species die out. When an animal or plant becomes extinct, it is gone forever.

One major problem for animals is the destruction of their habitats. These habitats are often destroyed by humans. As human populations increase, more land and space are needed for people's buildings and homes. When this area is destroyed, animals lose their natural homes. Swamps and forests are the most threatened. Trees are cut down, swamps are filled in, and habitats are destroyed so neighborhoods and cities can expand. When these habitats are destroyed, the animals have nowhere else to go. Without a habitat, the populations of animals go down.

Human are the only ones who can help this situation by limiting the loss of habitat for these animals. People need to be more aware of animal populations when considering expansion and building projects. The survival of animals is at stake. People can make a big difference by planning and being aware of the consequences of human actions. It is important to protect animal populations for future generations to enjoy.

Overhunting by humans is another cause of population decrease in animals. The worldwide problem of poaching and shooting animals for sport can quickly bring animals to extinction. Governments around the world must work together and agree on laws regarding animals. Some animals have a large enough population that hunting will not affect them, but others must be protected.

Don't worry, there is still hope. Animals that are already on the threatened or endangered lists still have a chance to have population growth. Some organizations are working to recreate habitats for them, wildlife refuges. There are also breeding programs to help their populations increase. Humans have an important job in protecting these animals, we can make a difference.

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### **Questions:**

1. What does extinction mean?
2. Explain what it means if an animal is endangered.
3. What are two ways that humans impact animal populations.
4. What is something that is being done to help endangered animals from becoming extinct.
5. The last line says, "Humans have an important job in protecting these animals, we can make a difference." Describe what that means, and do you agree with this opinion?