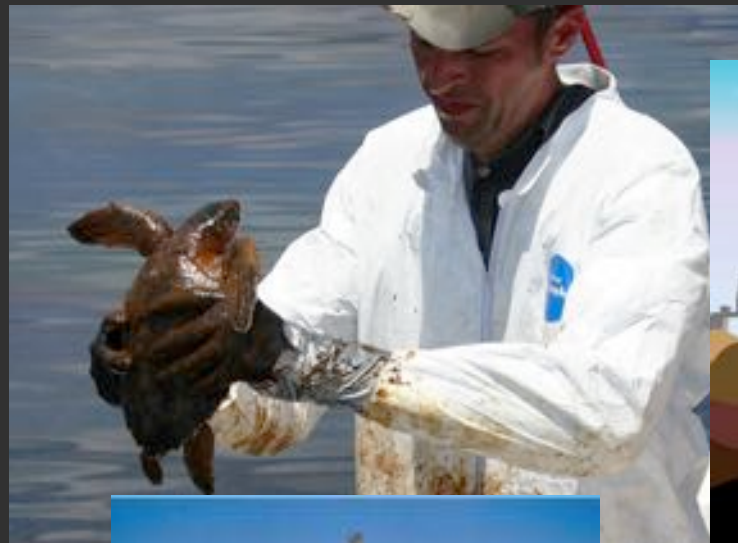


Oil Spills and the Damage They Inflict on the Environment

- Case study – Deepwater Horizon
- Oil and Water
- Oil Spills
- Preventing Oil Spills
- The Environmental Effects
- Economic and Social Effects
- Cleaning up oil spills



TeachWithFergy

Preview File

Please enjoy this preview of your Student Version of the lesson. I've created this PDF for ease of viewing and to decrease the file size but of course, your lesson will be in PowerPoint format.

- Some slides appear blank because they have been removed.
- Student versions have portions of the text removed which is given in the teacher version and appear as _____
- Other slides may have on them, this represents writing that has been removed.

Case Study - Deepwater Horizon

- April 20, 2010 – Gulf of Mexico. The oil rig named ‘Deepwater-Horizon’ is heavily damaged in an explosion
- Due to the catastrophic damage to the rig, oil starts to flow into the sea



Deepwater Horizon prior to explosion

- _____

Case Study - Deepwater Horizon



June 26, 2010 - Working around the clock burning undesirable gases from the still uncapped Deepwater Horizon well in the Gulf of Mexico – Photo credit: DVIDSHUB

Case Study - Deepwater Horizon

- By the time it was stopped,

- Birds, turtles, and dolphins amongst other animals were covered in oil
- The chemicals within the oil destroyed the coral within the sea and made fishing for human consumption impossible



Bird covered in oil. Photo credit – Marine Photobank

Case Study - Deepwater Horizon



NOAA veterinarian, prepares to clean an oiled Kemp's Ridley turtle.

Deepwater Horizon oil spill - May 24, 2010

Photo credit: NOAA

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Preventing Oil Spills

- There are many safety devices on oil tankers and rigs meant to prevent these disasters from occurring
- Watch the following video and record TWO safety measures that either didn't work or weren't installed that led to the Deepwater Horizon disaster

**IN SLIDESHOW MODE, CLICK THE
IMAGE TO SEE HOW VIDEOS ARE
EMBEDDED**



Oil and Water

- Why does oil float on top of water?
- _____
- This means that if you try to put water and oil together, they will clump separately



Oil Spills

- Damaged oil tankers and rigs are two of the main sources of oil that make its way into nature
 - There are other important contributors including automobiles, boats, industrial plants and machinery
 - This oil might be produced and used mainly on land, but
-



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The Environmental Effects

- Highly toxic oil may cause immediately mass

- Oil toxicity also works in the long-term



The Environmental Effects

- The harm that is done to the bodies of the different animals may lead to:
 - a slow death
 - a breakdown of their internal insulation (what keeps them warm)
 - damage to their reproduction organs
 - a change in behavior

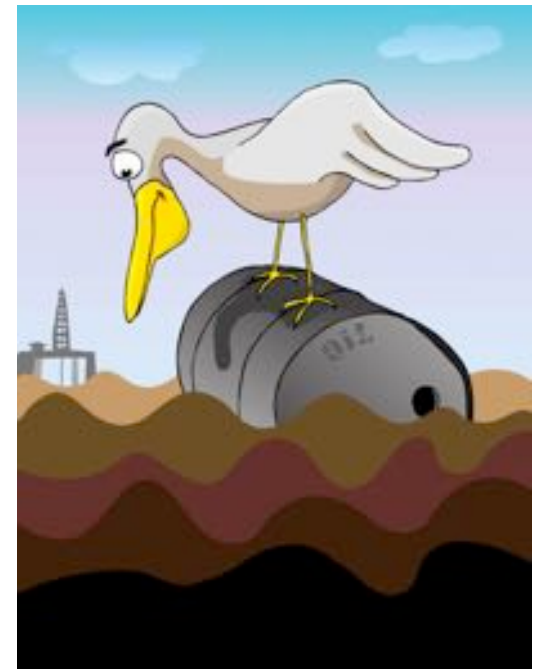
**Another devastating oil spill
was from the Exxon Valdez on
March 24, 1989**

This video has been removed



The Environmental Effects

- The sudden decrease in several types of species has a huge impact on the entire ecosystem
- _____
- Other animals can no longer obtain in the area even if their prey is still there



The Environmental Effects

- It's not just the animals that are harmed
- The fishing industry is also damaged, causing financial loss for the companies that operate in these area
- In the case of sudden and massive oil spills,

Economic and Social Effects



Health, safety and environment clean up oil on a beach in Port Fourchon, La., May 23, 2010 following the Deepwater Horizon oil spill



Workers using high-pressure, hot-water washing to clean an oiled shoreline near Prince William Sound after the Exxon Valdez spill.

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Cleaning Up Oil Spills - Booms

1. Booms_____

It is very effective at keeping the spilled oil within a particular area.

An oil containment boom deployed by the U.S. Navy around New Harbor Island, Louisiana – May 16, 2010



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Cleaning Up Oil Spills - Simmers

2. Skimmers: self-propelled devices that are able to attract and suck up the oil from the surface of the water. _____



Cleaning Up Oil Spills - Chemicals

3. Chemicals: different chemicals are released that can break down the oil into water and carbon dioxide.

C-130 Hercules drops an oil-dispersing chemical into the Gulf of Mexico May 5, 2010, as part of the Deepwater Horizon Response.



Cleaning Up Oil Spills – Controlled burning

4. Controlled burning: the oil at the surface is set on fire. Although this is an effective method,

