

Oil Spill Response



Engage and Reflect

Watch *Virtual Vitamin Z - Zoo Educational Lesson*:



Skills

- Density
- Properties of Matter



NGSS Science and Engineering Practices

- Structure and properties of matter
- Planning and carrying out investigations



Experience

- Time varies
- 1 or more people

Staff at the Detroit Zoological Society have trained to respond to oil spills and other hazardous materials spills that affect animals. Oil spills are very dangerous to animals, for a variety of reasons, including how oil spreads over bodies of water. This activity explores the properties of matter to demonstrate how the density of different liquids causes them to interact with each other.



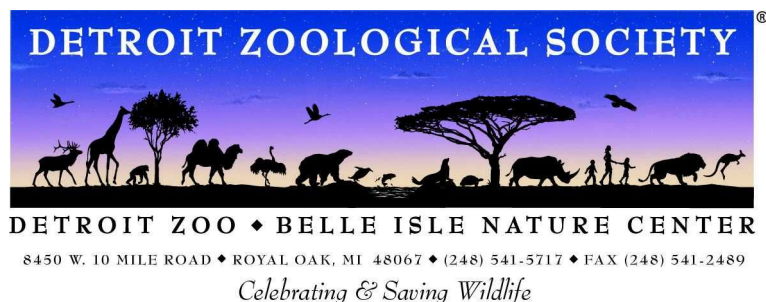
Celebrating and Saving Wildlife

The Detroit Zoological Society has several staff who are trained to respond to wildlife emergencies that involve hazardous materials. We have responded to three international oil spill emergencies that have impacted animals, including penguins and sea turtles.



Take Action

By supporting the Detroit Zoological Society by visiting, purchasing a membership or making a direction donation, you are enabling us to help animals around the world who are impacted by catastrophes such as oil spills.



Oil Spill Response

Tools

Clear glasses

½ cup each of water, vegetable oil, corn syrup

Food coloring, two colors

Paper clip, raisin, other small objects

1 or more people



Directions

Sink or Float?

- Pour ½ cup of each liquid in a clear glass cup
- Drop in a paper clip, raisin, or other small object to see which float and sink

Layers of Liquids

- Use food coloring to color at least two of the liquids.
- Pour each liquid into a single cup, slowly pouring to reduce the amount of mixing between liquids.
- The liquid on the bottom is the most dense, the one on top is the least dense.

What does this mean?

- Oil is less dense than water, causing it to quickly spread over a body of water, coating everything in the area.
- Animals that are coated in oil can ingest it, which is very dangerous.
- They can also become coated in oil, preventing them from keeping insulated, which can cause hypothermia.

Notes - For more resources on investigating liquid densities, visit:

https://www.education.com/activity/article/Layered_Liquids/