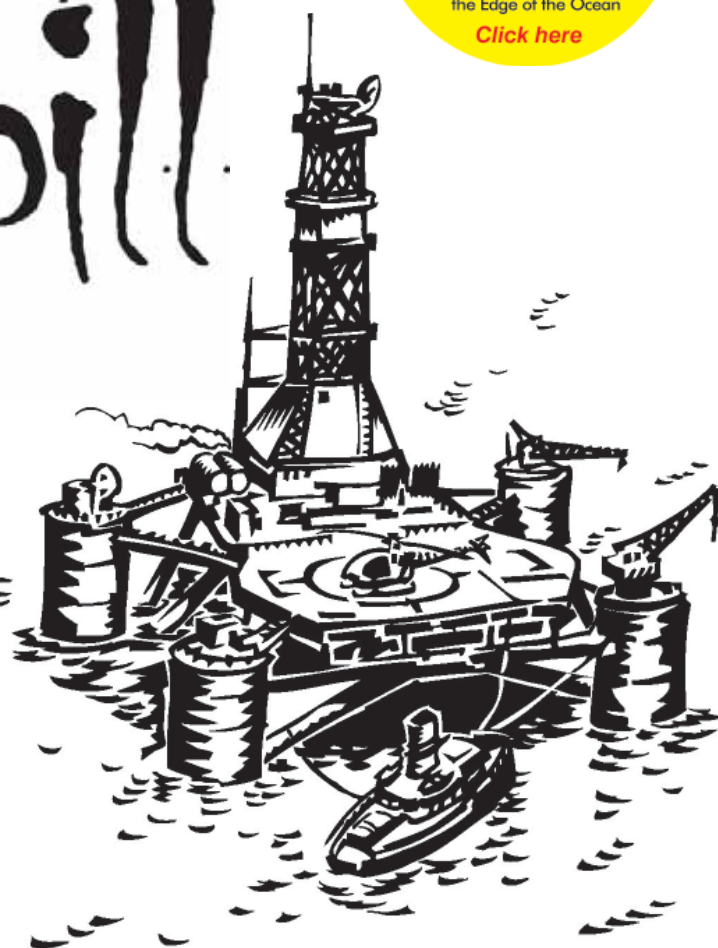




Oil that is spilled in the ocean floats on the surface of the water. It spreads out quickly to form a thin layer called an oil slick. As the spreading continues, the layer becomes thinner and thinner. It finally becomes a really thin layer called a sheen, which often looks like a rainbow. If you've ever seen a rainbow on a road or parking lot after it rains, you've seen a mini oil spill.

An oil spill affects birds and mammals that float or swim in the ocean by coating their bodies with oil. Sea birds and mammals, like otters and seals, need clean, dry feathers and fur to stay warm. When their feathers or fur are matted with oil they will no longer insulate them from the cold and they can die from hypothermia.

The arrangement of overlapping feathers on the back of a seabird makes the bird waterproof. Water will roll right off the bird's back. An underneath layer of soft, downy feathers traps warm air next to the bird's body. The trapped air will also help the bird to float. The bird must constantly clean and arrange the feather layers to maintain warmth and buoyancy. When a seabird becomes coated with oil the feather layers become matted.



If you find an oil-soaked bird, do not touch the bird. Instead, immediately call your local wildlife center or humane society. Wildlife rescuers are specially trained to handle and wash birds suffering from oil damage. For example, these animals may need to be stabilized, hydrated, nourished, and medicated before being washed. And it's critical that you never wash an oiled bird. The bird is already under large amounts of stress, and touching and washing by non-experts creates additional stress, which can lead to the bird's death.



Cold water soaks the soft feathers next to the bird's skin and the bird will no longer be able to stay warm or float and is at risk of drowning. It doesn't take much oil to destroy the protective feather system of a seabird. A spot no larger than a quarter may be enough to kill a sea bird.

Marine mammals and sea birds will die after an oil spill but many are saved by professional teams and dozens of volunteers, including veterinarians, that set up cleaning and recovery facilities.

Do the activity and see for yourself how professional teams save sea birds that are caught in an oil spill!

save the seabirds activity

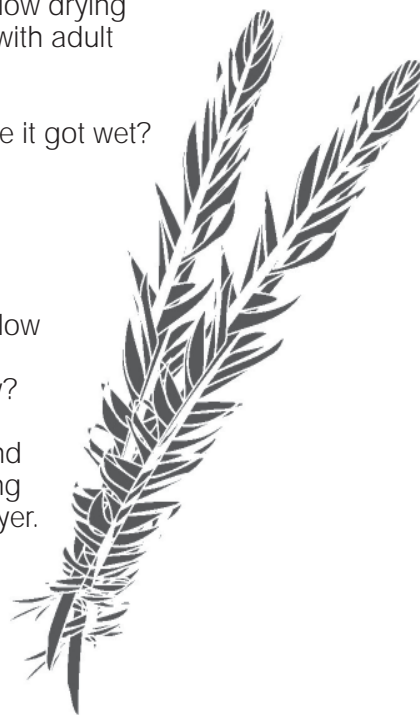


This activity
should
be done
with adult
supervision

Prepare the "oil": Put 3 tablespoons of vegetable oil in a cup. Add 2 tablespoons of cocoa powder. Stir to mix. Set aside.

Collect a feather from your yard or beach or use one from a craft supplier.

1. Feel and observe the appearance of the feather.
2. Wet the feather. Observe the condition of the wet feather. What happened to it?
3. Dry the feather by blotting it with paper towels, putting it in front of a fan or blow drying it with a blow dryer. If using a blow dryer follow manufacturer's precautions with adult supervision.
4. Observe the appearance of the feather. Does it look the same as it did before it got wet?
5. Put some tap water in a cereal-sized bowl. Pour some "oil" into the bowl.
6. Swim and dive the feather through the spilled oil.
7. Dry the feather by blotting it with paper towels, putting it in front of a fan or blow drying it with a blow dryer. Observe the condition of the feather. Does it look different from when it was dry? Would the bird be able to keep warm and dry?
8. Put one drop of dish detergent on the feather. Gently lather up the feather and rinse it under running water until the suds are gone. Dry the feather by blotting it with paper towels, putting it in front of a fan or blow drying it with a blow dryer.
9. Observe the appearance of the feather. Does it look the same as it did before it got oil on it? Would the bird be able to keep warm better with a clean feather or an oily feather?



Clean Up:

The fact that oil and water don't mix makes this demonstration very dramatic. It also makes clean up a bit messy. Absorb as much oil as possible on paper towels and throw them in the trash. Pour the water carefully down the drain with lots of running water. A damp paper towel with a drop of Dawn on it does a great job of removing chocolate-y oil from accessories.

For additional information:

- Feathers from craft suppliers have probably been altered by processing. They are only for demonstration purposes and may not have all of the same properties as the real things in an actual oil spill. For in-depth information of the qualities of oil, fur and feathers do a search on the Internet.
- Dawn original dishwashing detergent is the cleaning agent of choice to clean up oily animals after an oil spill and works best in the activity. Animal rescue groups have chosen Dawn for more than two decades because it is effective at removing oil while being gentle on the bird's delicate feathers and skin. Through three decades of experience, and a bit of trial and error, the success rate for rehabilitating oil-soaked birds has jumped from a mere three percent up to 90 percent, depending on the type of spill.

*This activity has been adapted with permission from the classroom curriculum *The Shore Tour: Living Responsibly on the Edge of the Ocean*. For more information go to www.lamotte.com or call 1-800-344-3100.*