

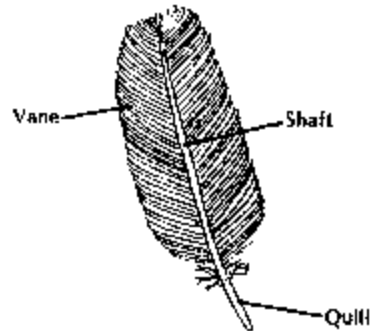
THE AFFECTS OF OIL SPILLS ON BIRDS

Question: What happens to bird feathers and eggs when they are covered with oil? Can bird feathers covered with oil be brought back to its original form?

Hypothesis:

Materials:

- cooking oil or baby oil
- shallow pan or tray
- a small magnifying glass
- a flight feather
- a jar that will hold oil
- Dawn detergent
- Paper towels



1. Examine a feather with a magnifying glass or a dissecting microscope. Sketch the feather below, label the **shaft**, **vane** and **barbs**.

2. Use your fingers to rub the feather *against* the vanes. This should mess the feather up. Now gently stroke your fingers of the feather with the vanes. This should cause the vanes to zip back together and return the feather to its original shape.

3. Submerge the feather for 5 seconds in your pan of water. Remove the feather and shake it gently. Compare the feather wet to the way it looks dry.

4. Lay the feather on a paper towel and record the amount of time it takes for it to completely dry.

5. Now simulate an oil spill by dipping the feather in oil. Remove the feather and record your observations (what does it look like). Do you think this bird could fly?

7. Birds caught in oil spills are washed with liquid Dawn to remove the oil. Wash the feather with one or two drops of dawn and rinse well.

8. Lay the feather on a paper towel and wait for it to dry completely. Record the time it takes for it to dry now.

9. Why does the feather remain wet longer after it has been washed with soap?

10. Do you think a bird after being washed with Dawn will have trouble flying or swimming?