



OBSERVING THE EFFECT OF OIL SPILLS ON BIRD FEATHERS

How oil affects the waterproofing of bird feathers.



Name: _____ Date: _____ Age/Grade: _____

QUESTION

How does oil affect the ability of bird feathers to repel water?

HYPOTHESIS

If a feather is coated with oil, then it will not repel water as well as a clean feather because _____

MATERIALS

- 2 clean feathers (same type/size if possible)
- Cooking oil (vegetable or canola oil works well)
- Water
- 2 clear cups or bowls
- Dropper or spoon
- Paper towel
- Timer (watch or phone)
- Tray or plate (to catch drips)
- (Optional) Magnifying glass

PROCEDURE

1. Label one cup "Clean Feather" and the other "Oiled Feather."
2. Place the clean feather in the "Clean Feather" cup.
3. Coat the second feather lightly with cooking oil. Use a few drops of oil and spread it gently along the feather with your fingers or a spoon. Wipe off any extra oil on a paper towel.
4. Place the oiled feather in the "Oiled Feather" cup.
5. Using a dropper or spoon, carefully place 10 drops of water onto the clean feather. Count how many drops bead up and roll off within 30 seconds. Record your results in the table below.
6. Repeat step 5 with the oiled feather.
7. Observe any differences in how the water looks, beads, spreads, or soaks in. Record your observations.

WHAT TO OBSERVE

- Do the water droplets bead up and roll off the feather, or do they soak in?
- Does the feather look darker when wet?
- Does the feather feel different?
- What happens to the drops after 30 seconds?

DATA TABLE

Feather	Number of Water Drops That Beaded Up and Rolled Off (within 30 seconds)	Number of Water Drops That Soaked In (within 30 seconds)	Observations (appearance, behavior of water, any other notes)
Clean Feather			
Oiled Feather			

ANALYSIS QUESTIONS

1. What happened when water was placed on the clean feather?

2. What happened when water was placed on the oiled feather?

3. How did oil affect the feather's ability to repel water?

4. Why do you think this effect would be important for birds in the wild?

CONCLUSION

Write a brief conclusion using information from your results.



Clean feathers help birds stay dry, warm, and able to fly. Oil spills can damage feathers and put birds' lives at risk.



Be curious. Be careful. Be kind to nature.