

How Do Penguins Stay Dry?

Objective:

Penguins live in the Southern Hemisphere and can venture as far down as Antarctica. How do these flightless birds stay warm and dry in frigid cold and icy waters of Antarctica? Penguins have a lot of feathers that are densely packed together that cover their entire body. Additionally, these feathers have an oil-producing gland that make their feathers waxy. The wax on their feathers repel the cold water and help keep them dry. This simple and fun penguin science experiment will show your students how penguins feather's stay dry in the cold temperatures and icy waters.



Materials:

- Penguin Printable
- Crayons (black, white, and orange)
- Spray bottle
- Water
- Blue Food Coloring (optional)

Steps:

1. Print the penguin printable on paper or card stock.
2. Fill a spray bottle with water.
Optional: You can add a couple of drops of blue food coloring to the water so that it is more visible when you spray it on the penguin.
3. Color the penguin with crayons. For the experiment to work correctly, you will need to color it completely and use a thick coating. You want to make sure to have covered the entire penguin without missing any spots, especially with the white crayon.
4. Spray the penguin with couple spurts of water. Be careful not to oversaturate the paper.
5. Observe the water repel off the penguin!

Discussion and Reflection:

- After you observe the results of the penguin science experiment, discuss how the wax from the crayon prevents the water from absorbing into the paper. How is this like the oil on a penguin's feathers repelling the water and keeping the penguin warm and dry?
- Are there any other birds that use this similar method to keep dry?