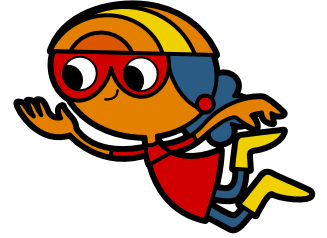


Effect of cream



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How a skin cream protects against dehydration



Research question

It's likely that you sweat in the summer. And then, in winter, in the heated air or outside in the cold, your skin sometimes becomes dry and taut, as if you are losing moisture through your skin. Oil-based skin creams help with this. But why? **What effect does the cream have on the skin?**

You need

- 2 freezer bags
- Petroleum jelly (e.g. Vaseline)
- 2 hair bands
- The experiment works best if you do it with someone.



How to do it

Step by step



1. First wash both hands thoroughly with soap and then dry them carefully.
2. Put a hair tie over each of your wrists.



1. Now carefully apply the oil-based cream to one of your hands. You'll probably need someone to help you. Try to avoid getting any cream on the other hand.
2. Carefully place a freezer bag over each hand. The bags should touch your skin as little as possible.
3. Seal the bags with the hair ties on your wrists.



1. Now observe for 5 minutes what happens to your hands and to the freezer bags.
2. Do you observe any differences? Which hand is sweating more?



Additional information

For parents and teachers



Context

This experiment shows how a fatty skin cream protects the skin from drying out. It is part of the cosmetics lesson series, which also deals with the structure of the skin. Knowledge of sweat glands in the skin is important for interpreting the experiment correctly.

Effect of greasy creams

There are sweat glands in the skin through which the body releases moisture into the surrounding air. This is important for regulating body temperature. This becomes particularly clear when we sweat: The evaporative cooling of sweat cools us down noticeably. In the experiment, we use a greasy cream to cover the pores of the sweat glands on one of our two hands; we do not apply any cream to the other hand. The effect becomes visible when we enclose both hands in plastic bags for a few minutes: less condensation forms on the inside of the bag that is placed over the creamed hand.

