

Surface of the skin



How large is the skin surface?

A simple method to determine its size

Research question

Your skin is more than just natural packaging for your body – it is a large organ and contains things like nerve cells, sweat glands and small blood vessels. But how large is the surface of your skin? **How can you measure how large your skin surface is?**

You will need

- A second person to conduct the experiment with you
- A roll of toilet paper
- Masking tape
- Measure tape or meter stick



How to do it

Step by step



Start with the legs

1. One child stands with their left foot on the end of the toilet paper.
2. The second child carefully wraps the paper around up to the hip and down their right leg.

The paper should not overlap.



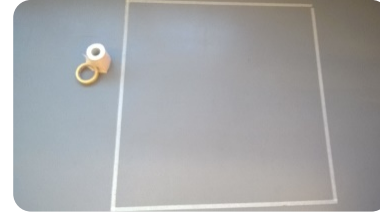
Wrap above the waist and down one arm

1. Start wrapping again over the trousers (stick the end down first) and up the chest.
2. Then wrap the toilet paper around one shoulder, down one arm and to the hand.



Wrap the other arm and then the head

1. Now wrap the other arm up from the hand to the shoulder.
2. Wrap around the shoulder and neck, then finally around the head.
3. And you're done! Now you can carefully unwind the paper again.



Mark out a square meter

1. Carefully unwind the toilet paper again.
2. Use masking tape to mark out a 1x1-meter square on the floor.
3. Neatly fill in the square with the toilet paper. If the square is completely filled but you still have some paper left, put a second layer on top of the first until all the paper is laid out.

How many square meters could you fill in? The number is approximately the size of the surface of your skin.



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Context

This experiment can serve as an introduction to a series of experiments on the subject of skin care and creams. Appropriate questions to investigate in this context are: What is the surface area of the skin? What is under the top layer of skin? Why does a cream protect the skin from drying out?

Skin surface

In an adult, the skin surface is on average just under 2 m². Its thickness ranges from around 1.5 to 4 mm. Among other things, the skin is our protective barrier against external influences. It is therefore important to take good care of it.

