



How do plants cool our air?

Explanatory video transcript

(0:07) How do plants help cool our air?

(0:10) Why do you think, on a hot summer day, in areas with more trees, the temperature tends to be lower?

(0:17) The trees provide shade and as you know, in the shade it is always cooler. But the shade of a tree is even cooler than the shade of a parasol. Why is that?

(0:29) To answer that question, let's see what happens when we cover a plant and a dry trunk with a plastic bag!

(0:36) We found that the plant released water inside the bag, ...

(0:45) ...while the dry trunk did not.

(0:49) Is water responsible for the lower temperatures? Let's confirm with the second experiment!

(1:00) The thermometer wrapped in wet cotton showed a lower temperature than the dry one.

(1:10) This is because when water goes from liquid to gas, it takes heat from the surroundings. This cools down the air around it.

(1:20) This explains why we sweat: to lower the temperature when the water on the surface of the skin evaporates. So, on a hot summer day, we get wet to cool off.

(1:33) As soil dries, water is transferred into the air as water vapor. That is evaporation.

(1:42) Plants actively release water, moving it out of their leaves into the drier air. That is transpiration.

(1:51) Combine the two and that's evapotranspiration – the process through which water leaves plants and soil.

(2:02) So, the next time you are in a park and you feel that fresh air near the trees, remember that it's the evapotranspiration of the plants that's helping to keep the air fresh and pleasant!

(2:15) Let's take care of our plants. They are wonderful and do so much for us!

