

# Inspired by Nature

A 4-part documentary series by **André Rehse**

In Coproduction with **EMS Films (The Netherlands), BR, ZDF/Arte**

4x52 min

The four-part series shows how humans can learn from nature. „Since 3.8 billion years life exists on earth. There was enough time to find the perfect solution.“, says the American ecologist Janine Benyus, who hosts the series.

Nature provides a huge undiscovered source of ideas. On one hand nature offers efficient „technologies“, on the other hand these smart solutions can be applied on industrial products. But most of all we can learn the principles of nature. If we mimic them, we will be able to master many challenges of our industrial society.

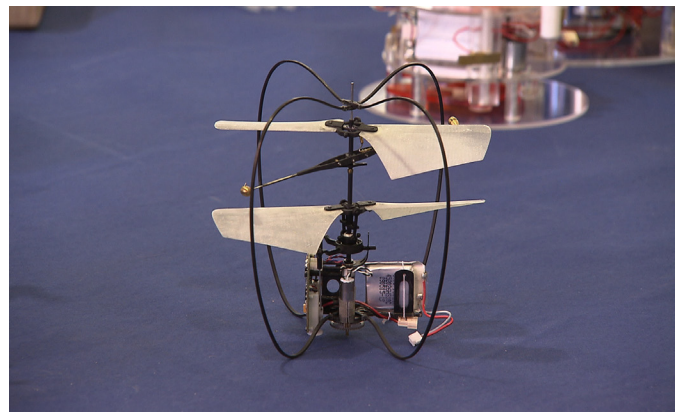
“Biomimicry” is Greek and means: mimic life. In Germany these disciplines in science and technology are called “Bionik” or “Biomimetik”. In the series we will introduce a number of examples for technologies inspired by nature. “Ask Nature – The Biomimicry Revolution” is so far the greatest science-series made on this topic.

## Episode 1 – The Art of Movement

“Well, it is new to us in western industrial culture. I think biomimicry is ancient. I think as long as we are on earth we stare up at birds admiring how they can break their earthly bonds and fly so gracefully and use the wind and the currents to their advantage. That grace and manoeuvrability has always inspired us.” (Janine Benyus)

The invention of the airplane was only a first step. Engineers enviously look at the sky and marvel at the elegance of their natural role models. Other researchers hope to develop amphibious spider vehicles or actuators that work like fish fins. Numerous examples of efficient locomotion can be found in nature. And many of these sustainable ideas are still unexploited. There is an enormous, still neglected potential.

The first episode gives an introduction into the field of the new science of biomimicry. How can this new discipline help us overcome our limits? What can we learn from nature beyond that?



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## Episode 2 – Building with Efficiency

"Before we built the house, we did what we called a genius-of-place-report, because we figured that we are not the first ones to have lived here, that there are a lot of organisms that have been making their living here for aeons. So let's ask them how they heat themselves, how they ventilate themselves, and how they cool themselves – what kind of materials they use." (Janine Benyus)

Today we are building houses that can largely be described as energy-guzzlers, the production of construction materials like concrete uses a very high amount of raw materials.

What can we deduce from the adaptability of animals and plants that would help us create a more sustainable world today?

The second episode deals with the real estate of nature: plants and sponges. Just as human dwellings they are bound to locations. They are forced to find the best survival strategy on their „land“. In millions of years there has emerged a kind of natural archive of strategies and solutions that is being improved constantly, from generation to generation. We can utilize this archive, we just need to learn to read and understand it.

## Episode 3 – Orientation in Chaos

"I believe that our economy, our species can be welcomed on the planet if we learn how to do what other organisms have done, which is to stand in the middle of that material flow and that energy flow in a way that doesn't leave behind huge amounts of waste." (Janine Benyus)

How does nature go without cleaning supplies? How do insects and geckos stick to the ceiling without any adhesives?



And how do natural colors turn out shiny, without solvent-based paint? Nature does not require chemical industry. Material scientists study the 'inventions' of nature and today they are able to understand the way textiles work more and more. Through this close look at nature we discover naturally sustainable perspectives for the future.

The fourth and final episode of the series „Inspired by Nature“ shows, by means of numerous examples, how we can get a grip on the problems of our industrial society by consulting the principles of nature.

## Episode 4 – Fabrics of Future

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