



Eco-Motion

Introductory story

Lilu and Alina were on vacation on their favourite island. It was the end of their vacation, and they wanted to return home. The next day, school would start again, and they were excited to see their friends again.

When they were packing their things, they realized that they had no fuel for their motorboat. How could they get back home from the island? As they were thinking about this, they saw wind turbines far off the shore and had an idea. Could the wind move their boat?

Yes, of course! Lilu and Alina decided to make a sailboat. They wanted to use waste materials that had been washed up the beach to build it. Excited, they ran to the beach. They collected corks, sponges, foam, wooden sticks, old paper and other things, and started working on their boat.

- [How Does a Sailboat Work?](#)

Lilu and Alina had designed a wonderful sailboat to return home from the island. When they tried to sail their boat for the first time, it moved. But there was a problem: The wind was not blowing consistently. When the wind was not blowing, the boat would not move and would stop. Lilu and Alina did not want to get stuck in the middle of the water. So, they had to find another way to move the boat.

That's when their eyes fell on the propeller on their motorboat on the shore. The engine turned the propeller. But could the propeller be moved without an engine, without using fuel? They wanted to find out. Using pieces of wood and rubber bands they found in the water, they built their own boat propeller. Lilu and Alina were excited by their idea. Could their propeller work?

- [How Does a Propeller Boat Work?](#)

It worked! Lilu and Alina cheered. They could move with their propeller boat – but soon it became very tiring to rotate the propeller, and the weather was hot. The boat was also not moving fast enough. They wished that someone stronger would help them move the propeller. Exhausted, they looked up to the blue sky. The sun was shining bright. This gave Lilu and Alina an idea: They could use solar energy.

For this, they needed a solar panel and a motor. Lilu and Alina moved their boat back to the shore. They visited the farmers on the island and borrowed a solar panel and a motor from them. The two of them were excited that they could use solar energy for their boat and go home safely.

- [Further idea: Solar boat experiment](#)

