# How does a sailboat work?

### Explanatory video transcript

*(0:10)* The day was windy, and Lilu took advantage of the breeze to sail to school, avoiding the use of fossil fuels that harm the environment.

*(0:21)* But how does a sailing boat manage to sail?

*(0:26)* The sun is our primary energy source: about 2% of the sun's energy that reaches our planet is converted into wind energy.

*(0:38)* The sun's heat warms the atmosphere, leading to the formation of wind.

*(0:44)* Objects exposed to the sun heat up at different rates. For example, during the day, there are temperature differences between land and water from the sea or rivers, with land becoming warmer than water.

*(0:59)* Let's demonstrate with a model how wind is formed.

*(1:04)* The infra-red lamp represents the sun, we have a box with soil and another one with ice to represent the different temperatures at which the land and the water of the sea or rivers are during the day.

*(1:17)* We use the smoke from an incense stick to represent the particles in the air.

*(1:23)* As a result, warm air rises over land, while cooler air from water moves in to fill the void, creating the circulation of air – known as wind.

*(1:38)* These moving air particles exert force on the sails of a boat, propelling it gracefully through the water.

*(1:46)* Lilu has found an eco-friendly energy solution: wind power.