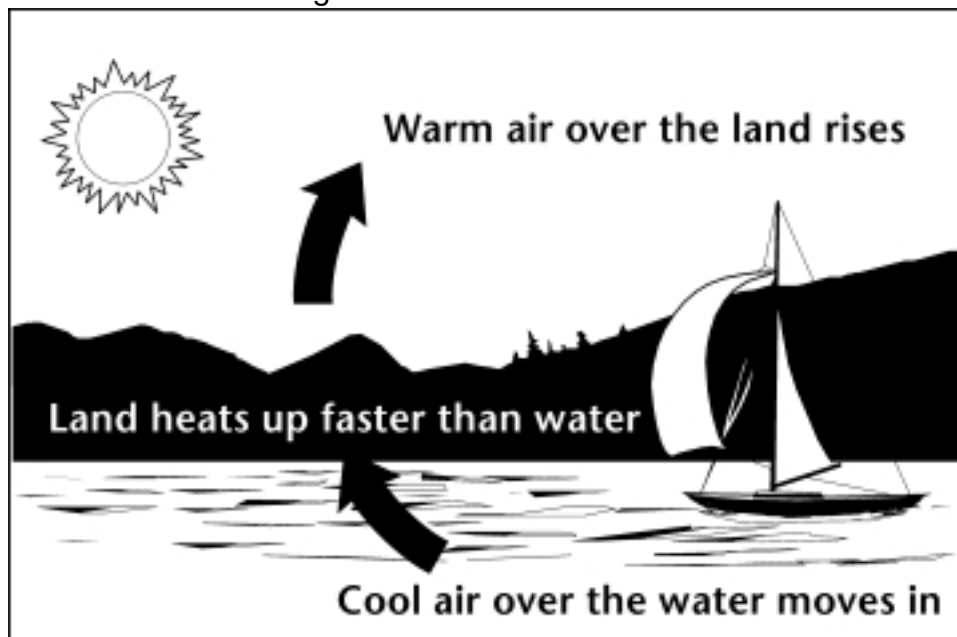


Energy from Moving Air

How Uneven Heating of Water and Land Causes Wind



Source: National Energy Education Development Project (Public Domain)

Wind is simply air in motion. It is caused by the uneven heating of the Earth's surface by the sun. Because the Earth's surface is made of very different types of land and water, it absorbs the sun's heat at different rates. One example of this uneven heating can be found in the daily wind cycle.

The Daily Wind Cycle

During the day, the air above the land heats up more quickly than the air over water. The warm air over the land expands and rises, and the heavier, cooler air rushes in to take its place, creating wind. At night, the winds are reversed because the air cools more rapidly over land than over water.

In the same way, the atmospheric winds that circle the earth are created because the land near the Earth's equator is heated more by the sun than the land near the North and South Poles.

Wind Energy for Electricity Generation

Today, wind energy is mainly used to generate electricity. Wind is a renewable energy source because the wind will blow as long as the sun shines.

