Solar Energy

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Solar energy is light energy.
Solar energy is renewable.

Solar Energy

TEACHER

Most energy sources get their energy from the sun. We call it **solar energy**. It travels from the sun to the Earth in waves or rays. Some are light rays that we can see. Some rays we cannot see, like x-rays. The sun is a star. It is 100 times wider than Earth and made of super-hot gases. It sends out huge amounts of energy every day. Most of the energy goes off into space. Only a small part reaches the Earth.

We use solar energy in many ways. All day, we use sunlight to see what we're doing and where we're going. Sunlight turns into heat when it hits things. Without the sun, we couldn't live on the Earth—it would be too cold. We use the sun's energy to heat water and dry clothes.

Plants use the light from the sun to grow. Plants take the energy in light and store it in their roots, stems, fruits, and leaves. That energy feeds every living thing on Earth. We can also burn plants to make heat.

The energy from the sun makes rain fall and the wind blow. We can capture that energy with dams and windmills. Coal, oil, and natural gas were made from prehistoric plants and animals. The energy in them came from the sun. We use that energy to cook our food, warm our houses, run our cars, and make electricity.

Solar energy is free and clean. There is enough for everyone, and we will never run out of it. Solar energy is renewable. The sun will keep making energy for millions of years. Why do we not use the sun for all our energy needs? We do not know how to yet. The hard part is capturing the sunlight. It shines all over the Earth, and only a little bit reaches any one place. On a cloudy day, most of the light never reaches the ground at all.

Lots of people put **solar collectors** on their roofs. Solar collectors capture the sunlight and turn it into heat. People heat their houses and their water using the sun's energy. **Solar cells** (solar panels) can turn light energy into electricity. Some toys and calculators use solar cells instead of batteries. Big groups of solar cells can make enough electricity for a house. They can be good for houses far away from power lines. Today, solar energy provides about seven percent of the electricity we use in the U.S., and it is growing each year as solar cells get used more. Scientists are always looking for new ways to capture, store, and use solar energy more efficiently.

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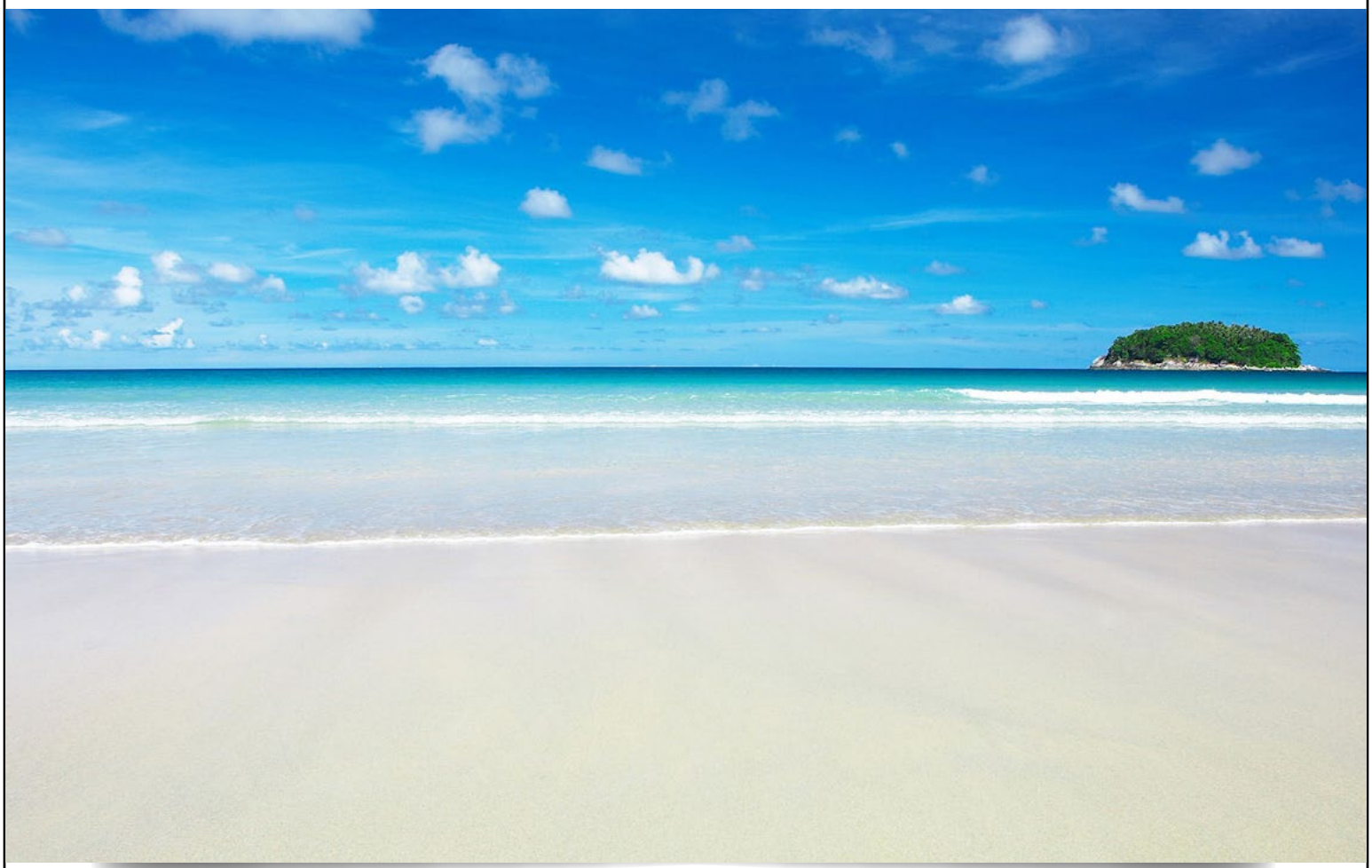
Plants convert the sun's energy to food.

Solar energy makes plants grow.



Solar energy heats land and water.

When solar energy comes in contact with an object, it turns into heat.

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Some people hang clothes outside to dry.

We can use solar energy to dry our clothes.

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Solar panels are made of many solar cells. People put solar panels on their homes to turn solar energy into electricity.

Solar cells turn sunlight into electricity.

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