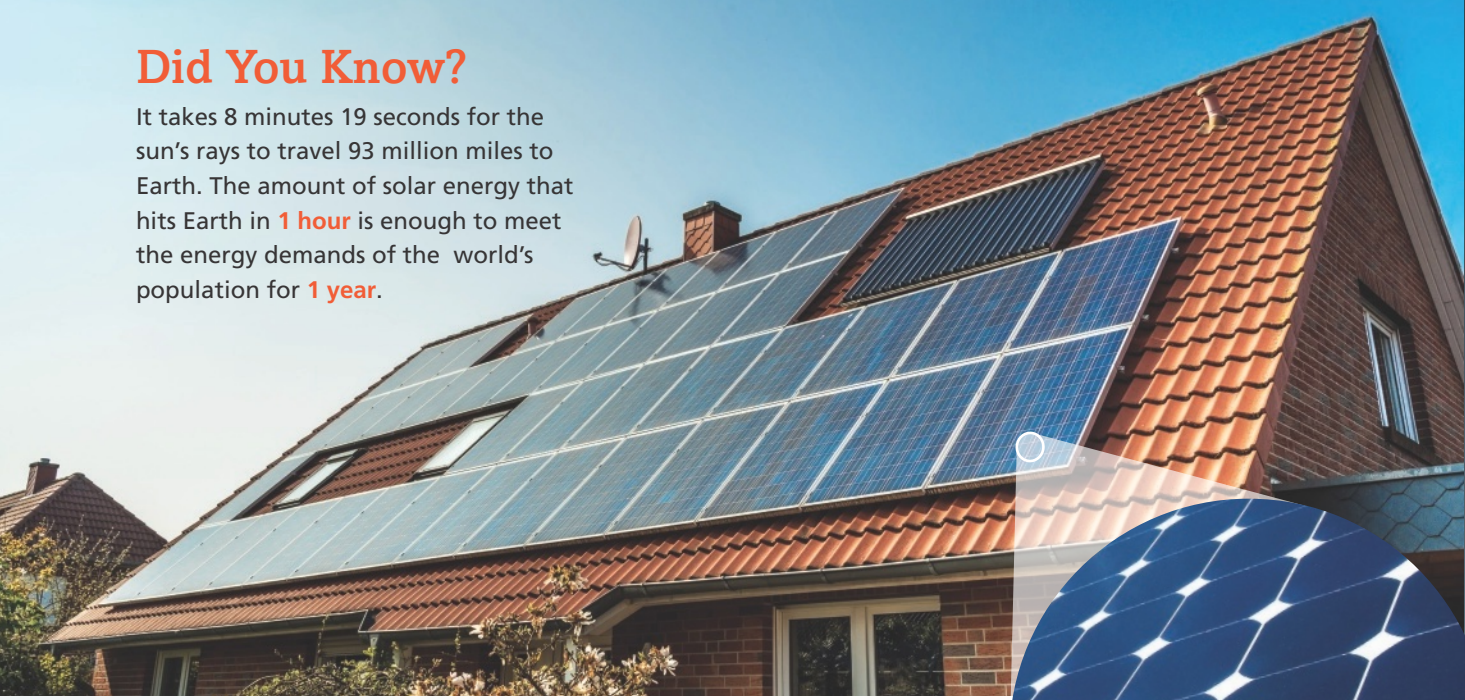


Did You Know?

It takes 8 minutes 19 seconds for the sun's rays to travel 93 million miles to Earth. The amount of solar energy that hits Earth in **1 hour** is enough to meet the energy demands of the world's population for **1 year**.

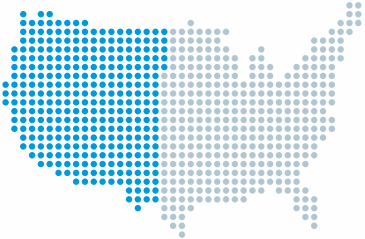


In 2004, about **15,000 homes** in the United States had solar panels. By the end of 2014, about **600,000 homes** had solar panels.

2004

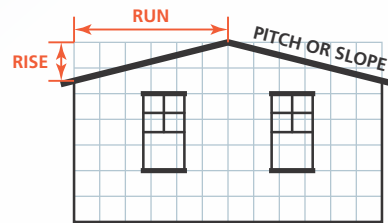


2014



•1,500 homes

What Is Roof Pitch?



Roof pitch is closely related to **slope**. This roof's pitch is equivalent to 3 : 12, which means the roof rises (or falls) 3 inches for every horizontal foot.

The steepness, or pitch, of a roof affects many things, including the installation of solar panels and how much snow the roof can handle.

Solar panels are a collection of solar cells. Solar cells **convert sunlight to electricity**. The solar cells in a solar panel are arranged so that solar energy travels along a specific path.

Your Task: Design a Pitched Roof

You and your classmates will analyze roofs to determine their pitch. Then you will design a roof with a pitch that is appropriate for installing solar panels.

