CHAPTER 1

What is Energy?

You need **energy** to walk a dog. A computer needs energy to do work. Energy makes things happen.

A plant needs energy to grow.
A plant gets most of its energy from sunlight.
A plant changes as it uses energy and grows.
Energy is the ability to cause change.

A pumpkin seed is small.

The seed uses energy to grow into a plant.

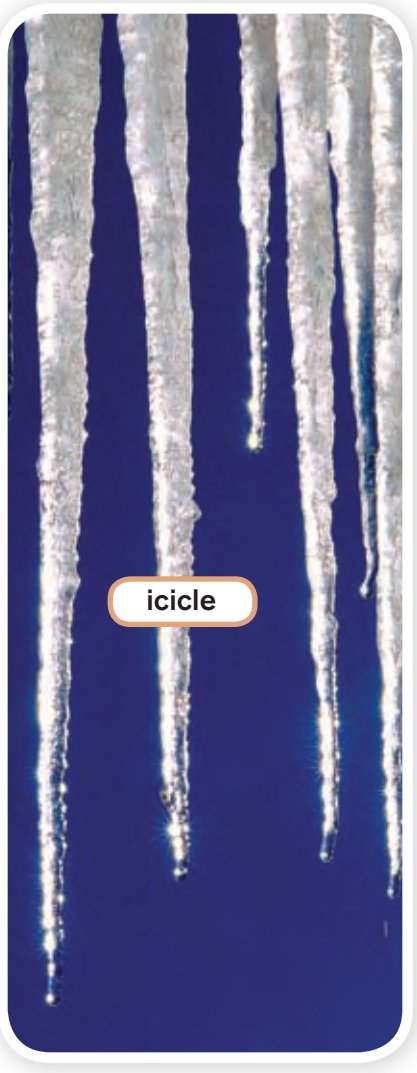
The plant uses energy to produce a pumpkin.

Forces make things move.
A force is a push or a pull.
When a force moves something, **work** is done.

Energy is needed to make a force.
Energy is needed to do work.

It takes energy to do work.

It takes energy to chop wood.
It takes energy to heat your home.
It takes energy to melt ice.



KEY IDEA Energy is the ability to do work or cause change.

The sun gives off huge amounts of energy. The sun's energy spreads out through space. Some of the sun's energy reaches Earth. Nearly all the energy on Earth comes from the sun.

▲ **Most plants and animals could not live without the sun's energy.**

KEY IDEA Most of the energy on Earth comes from the sun.