

What is Energy?

A young girl in a pink shirt and khaki shorts is running on a paved path, holding a leash attached to a brown and white dog. The dog is running alongside her, looking happy with its tongue out. The background shows green bushes and trees under a clear sky. The word 'leash' is in a white box with an arrow pointing to the leash, and the word 'dog' is in a white box pointing to the dog.

leash

dog

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.

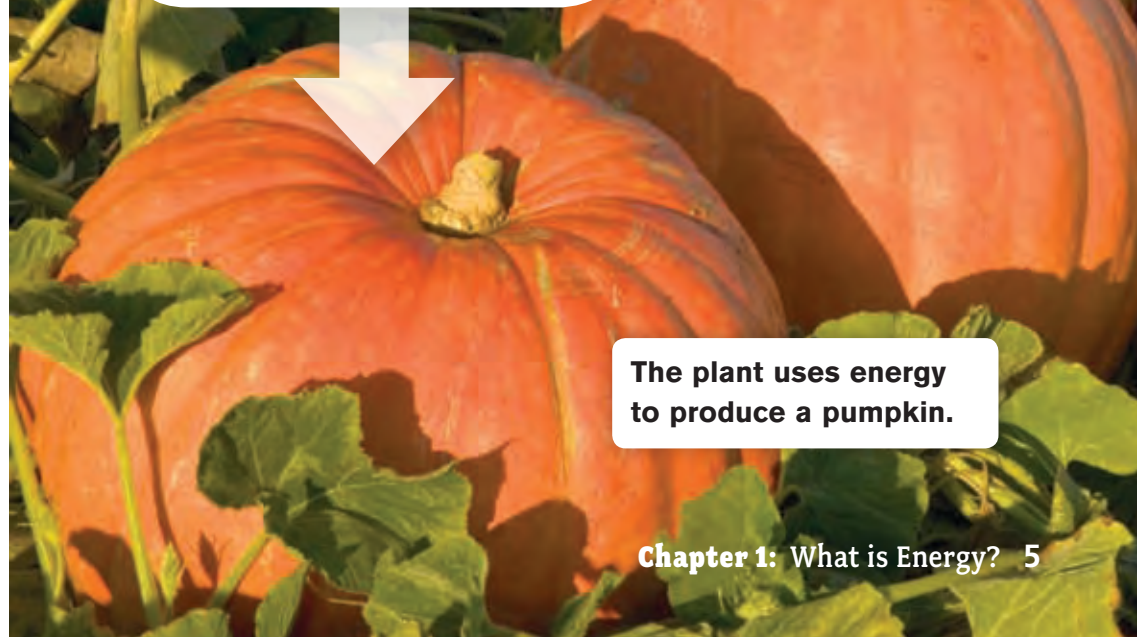
Energy is the ability to cause change.



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.

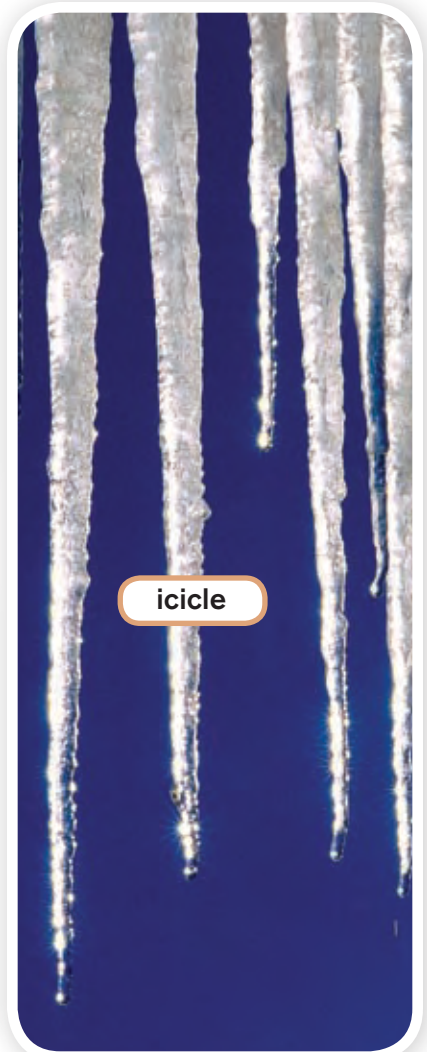
When a force moves something, **work** is done.

Energy is needed to make a force.

Energy is needed to do work.



It takes energy to 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.




sun



elk

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



wheat field

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