

# 3<sup>rd</sup> Grade Science

## Week 5

<b>Your Week at a Glance</b>
<ul style="list-style-type: none"><li>• Energy and Change</li><li>• NGSSS: SC.3.P.10.2</li></ul>

- Energy and Change
- NGSSS: SC.3.P.10.2

**Student Name:** \_\_\_\_\_

**Teacher Name:** \_\_\_\_\_

**School:** \_\_\_\_\_

**SC.3.P.10.2** Recognize that energy has the ability to cause motion or create change.

## Energy and Change

**Energy** is the ability to make something move or change. If you want to score a soccer goal, it takes energy. If you want to dig a hole to plant flowers, it takes energy. If you want to heat up water to make tea, it takes energy to change the temperature of the water.

### Changing Position or Motion

Position is the location of an object. If you change the position of the object, you have put the object in motion. You can move a chair by pushing it. You can pull a wagon by pulling it. Pushes and pulls can cause an object to move, to stop moving, or to change their motion. It takes energy to push and pull.



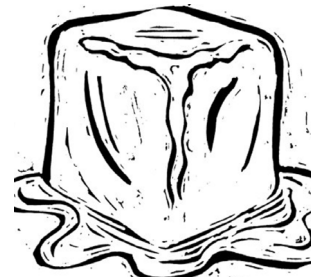
### Warming

It takes energy to warm up objects. Think of cooking on a campfire. You can hold a marshmallow on a stick over the fire, and the energy from the fire will cause changes in the marshmallow.



Light energy from the sun can also cause objects to warm up. Measure the temperature of an object. Then place the object in the sun. An hour later, measure the temperature again. You will find that the object's temperature went up.

A temperature change can cause a change in state. Place an ice cube in a sunny spot. What happens? The ice melts. It changes from a solid to a liquid. Adding heat energy to liquid water can cause it to boil or evaporate.



### Power Up

Electrical energy flowing through wires can also cause change. Plug in a lamp, and the bulb comes on. Plug in a phone, and the battery charges.



# Student-Response Activity

Use a word from the word bank to complete the sentences.

temperature      move      sun      cook

- ❶ Energy can cause an object to \_\_\_\_\_ to a new position.
- ❷ Light energy from the sun can cause objects to have a higher \_\_\_\_\_.
- ❸ Energy is used to \_\_\_\_\_ food.
- ❹ Energy from the \_\_\_\_\_ makes you feel warm at the beach.
- ❺ Complete the chart with examples of ways energy causes change.

Form of Energy	Way I Use Energy
Light	
Heat	
Electricity	

## Benchmark Assessment SC.3.P.10.2

Fill in the letter of the best choice.

- 1 Which is **not** a way energy from the sun will change the object shown below?



- (A) It will cause a change in color.
  - (B) It will cause a change in shape.
  - (C) It will cause a change in hardness.
  - (D) It will cause a change in temperature.
- 2 Which is correct?
- (F) Energy always causes a change.
  - (G) Energy is the ability to cause a change.
  - (H) Energy does not cause change.
  - (I) Energy causes changes in temperature but not color.

- 3 Which change is **not** caused by adding energy to water?

- (A) boiling
- (B) evaporating
- (C) freezing
- (D) melting

- 4 Which change does the picture show?



- (F) change in mass
- (G) change in position
- (H) change in volume
- (I) change in color