



## Can you make a change in matter?

You observe many things changing. Birds change their positions when they fly. Bubbles form in boiling water. The filament in a lightbulb glows when you turn on a light. How can you cause a change in matter?

### Procedure

1. Read and complete a lab safety form.
2. Half-fill a **foam cup** with **sand**. Place the bulb of a **thermometer** about halfway into the sand. *Do not stir*. Record the temperature below.
3. Remove the thermometer and place a **lid** on the cup. Hold down the lid and shake the cup vigorously for 10 minutes.
4. Remove the lid. Measure and record the temperature of the sand.

### Data and Observations

### Think About This

1. What change did you observe in the sand?

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2. **Predict** how you could change your results.

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3.  **Key Concept** What do you think caused the change?

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**Content Practice A****LESSON 1****Forms of Energy**

**Directions:** On each line, write the term from the word bank that correctly completes each sentence. Some terms might be used more than once or not at all.

electrical	energy	kinetic	mechanical	nuclear
potential	radiant	sound	thermal	work

1. Energy due to motion is \_\_\_\_\_ energy.
2. The amount of \_\_\_\_\_ energy an object has depends on the object's speed and mass.
3. Energy that is stored in the nucleus of an atom is \_\_\_\_\_ energy.
4. The ability to cause change is \_\_\_\_\_.
5. \_\_\_\_\_ energy is stored energy.
6. Energy that is carried by an electric current is \_\_\_\_\_ energy.
7. Gravitational, elastic, and chemical are three forms of \_\_\_\_\_ energy.
8. The transfer of energy that occurs when a force is applied over a distance is \_\_\_\_\_.
9. Energy that is the total of the kinetic energy and potential energy in an object or group of objects is \_\_\_\_\_ energy.
10. The energy of atoms and molecules in an object due to their motions is \_\_\_\_\_ energy.
11. Energy is the ability to do \_\_\_\_\_.
12. Energy carried by electromagnetic waves is called \_\_\_\_\_ energy.