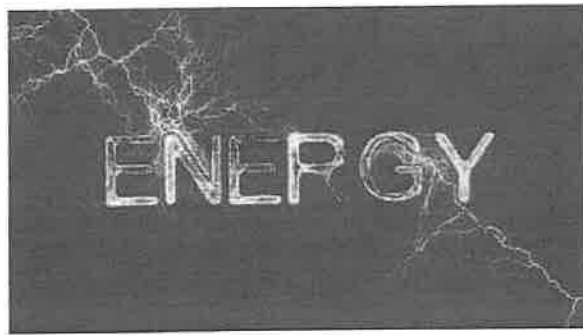




# Energy Unit









Name: \_\_\_\_\_



## Energy Unit- Terms to Know

Types of Energy	Definition	Example
Potential		
Kinetic		
8 Forms of Energy	Definition	Example
Heat 		
Sound 		

	Definition	Example
Gravitational 		
Electrical 		
Elastic 		
Motion 		
Chemical 		
Light 		

Label each picture as either having potential energy or kinetic energy

1. \_\_\_\_\_



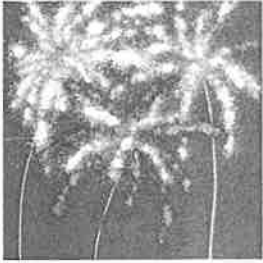
2. \_\_\_\_\_



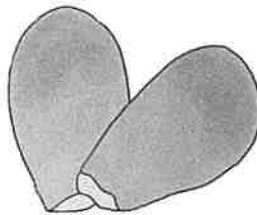
3. \_\_\_\_\_



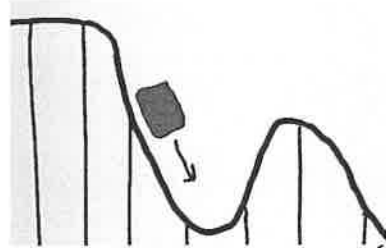
4. \_\_\_\_\_



5. \_\_\_\_\_



6. \_\_\_\_\_



7. Explain how you know if picture 2 was potential or kinetic.

---

---

8. What would happen if we added heat to the popcorn kernels in picture 5?

---

---

9. Choose one of the pictures above that you labeled as potential energy and tell how you can turn it into kinetic energy.

---

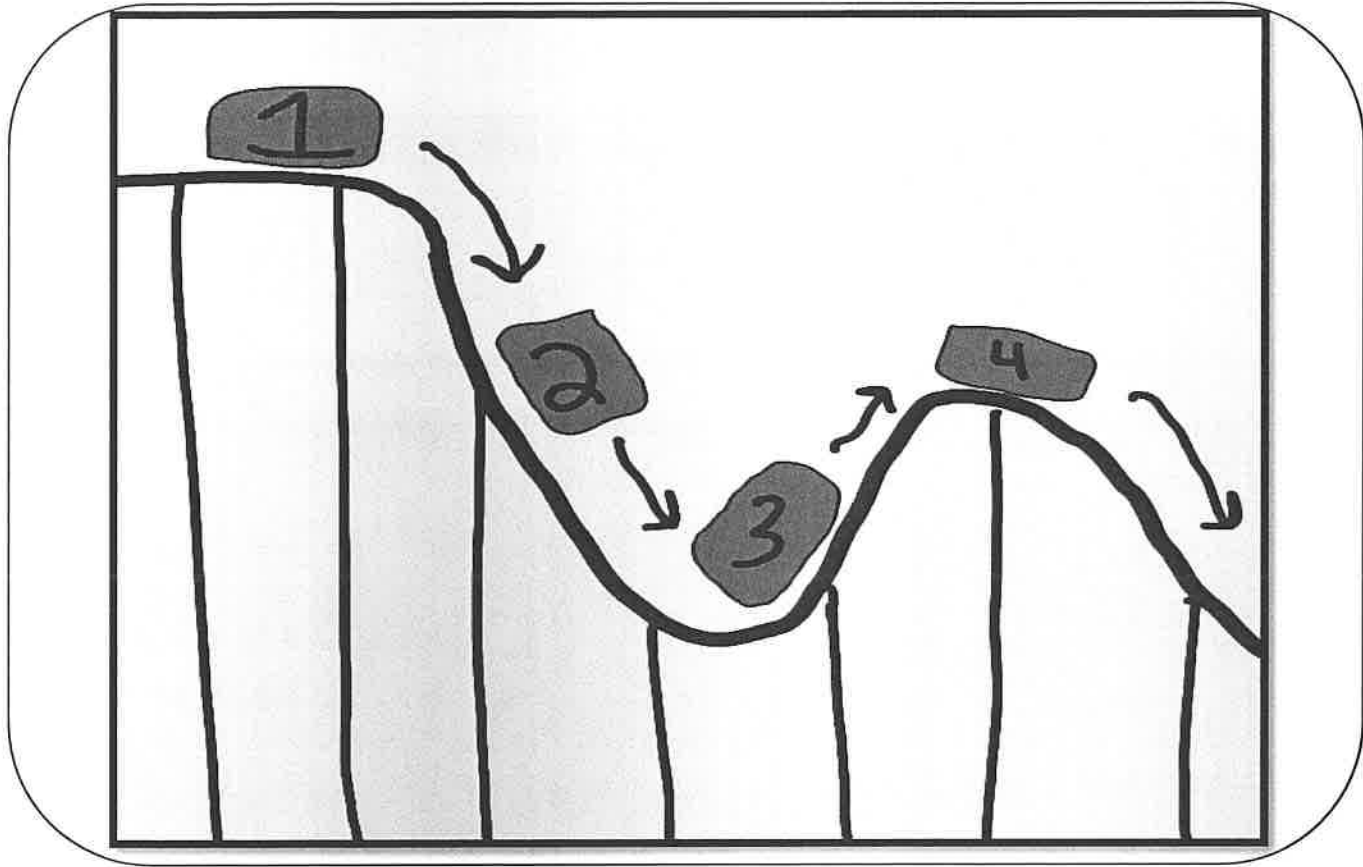
---

10. How would we give more potential energy to the roller coaster cart?

---

---

Use the diagram below to answer the questions that follow.



1. Which 2 roller coaster carts have the most potential energy?

---

---

2. Out of those 2 carts, which cart has the most potential energy overall?

---

---

3. Describe the energy of roller coaster cart 2 in terms of its potential and kinetic energy.

---

---

4. Define, in your own words, potential energy:

---

---

5. Define, in your own words, kinetic energy:

---

---

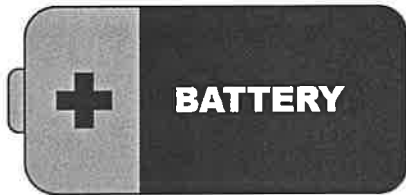
# Forms of Energy Practice

Names: \_\_\_\_\_

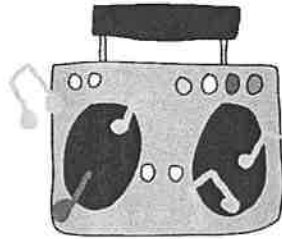
Label each picture below with the correct type of energy that creates the most change. Each type of energy should be used once. If you see more than one type of energy in a picture, circle it!

Mechanical    Sound    Electrical    Light    Heat    Chemical

1. \_\_\_\_\_



2. \_\_\_\_\_



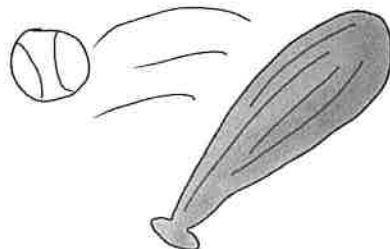
3. \_\_\_\_\_



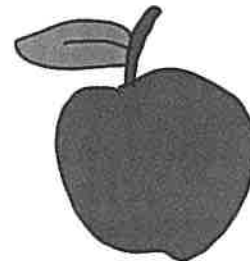
4. \_\_\_\_\_



5. \_\_\_\_\_



6. \_\_\_\_\_



7. Did you circle any pictures for having more than one type of energy present? Write about one that you circled and state what other energy is present.

\_\_\_\_\_

8. How would you describe chemical energy?

\_\_\_\_\_

9. Write about how you were able to identify the type of energy present in picture 5.

\_\_\_\_\_

You will need to be able to answer the questions below for our quiz.

How are **kinetic energy** and **potential energy** alike and different?

---

---

---

---

---

---

Describe one form of energy that you use during the day. Provide an example of how you use it.

---

---

---

---

---

---

Describe one type of energy you **could not live without**. (Explain Why)

---

---

---

---

---

---

Describe something that you use every day that requires **electrical energy**?

---

---

---

---

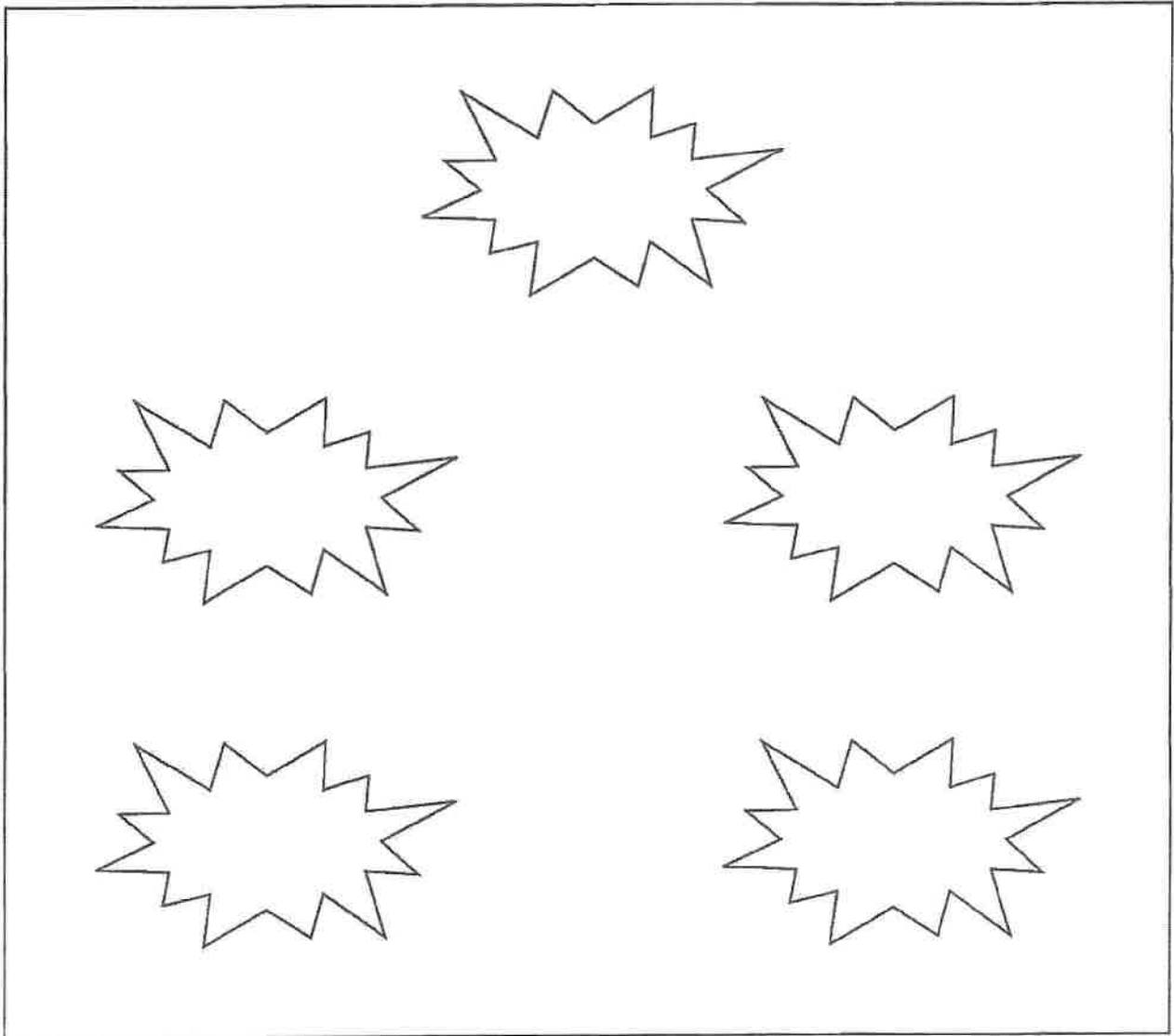


Date: \_\_\_\_\_

## Mapping Energy Transfers

Type of Toy: \_\_\_\_\_

Use arrows and words to show how energy was transferred in this toy. You can use as many of the shapes as you need for your map. You can also draw more shapes if you need them.



### Energy Forms

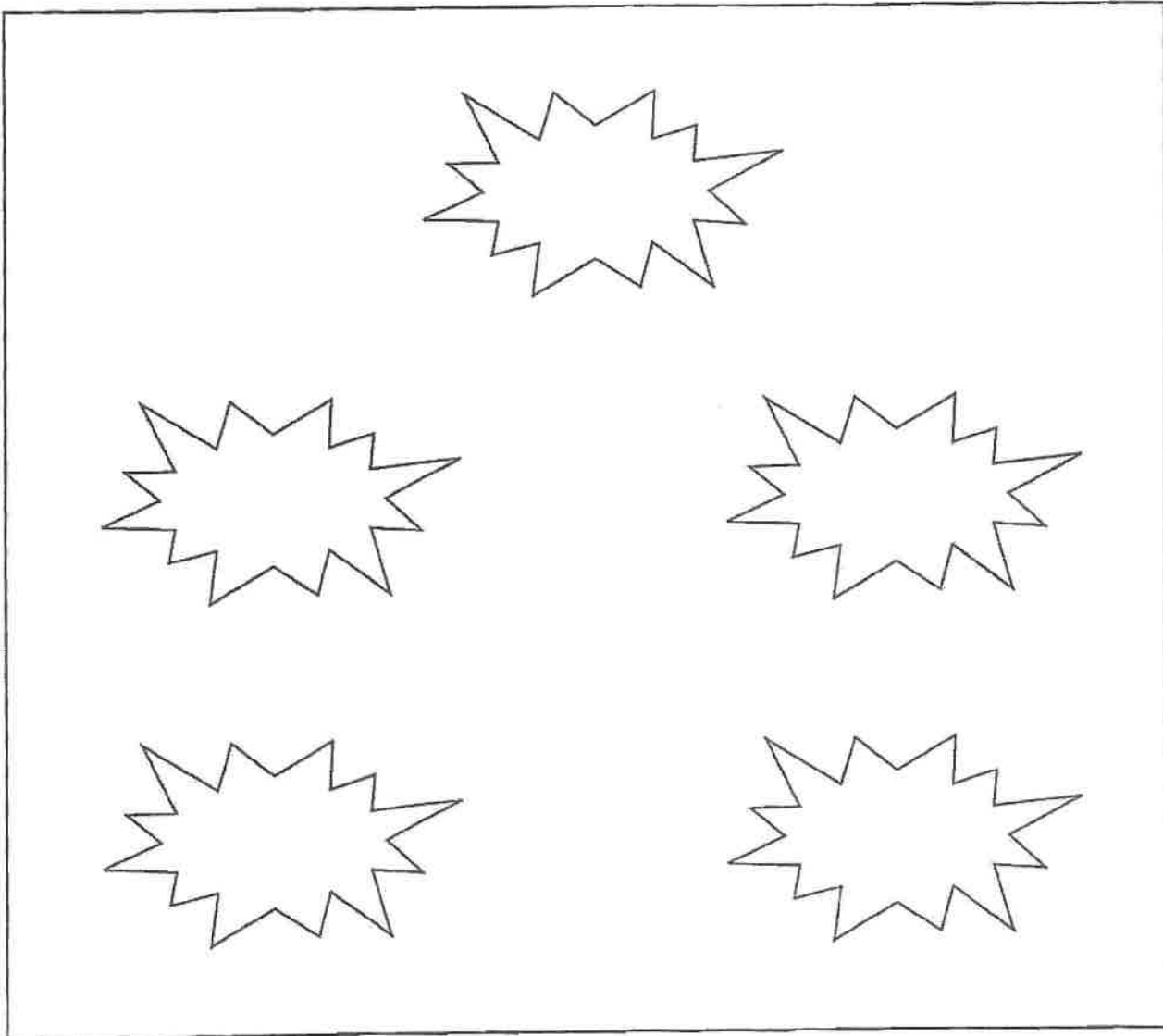
Electrical Chemical Motion Elastic Gravitational Heat Light Sound

Date: \_\_\_\_\_

## Mapping Energy Transfers

Type of Toy: \_\_\_\_\_

Use arrows and words to show how energy was transferred in this toy. You can use as many of the shapes as you need for your map. You can also draw more shapes if you need them.



### Energy Forms

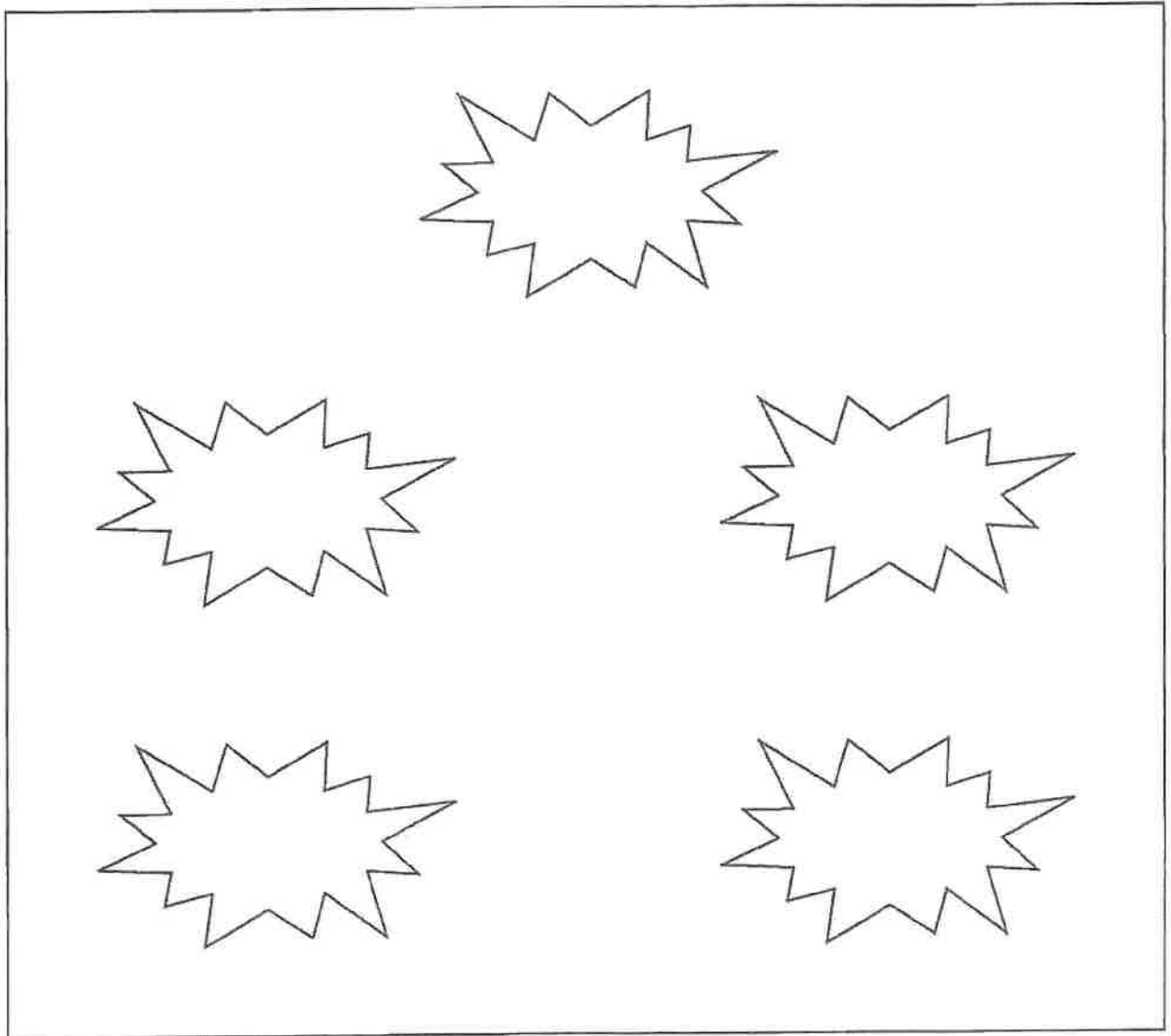
Electrical Chemical Motion Elastic Gravitational Heat Light Sound

Date: \_\_\_\_\_

## Mapping Energy Transfers

Type of Toy: \_\_\_\_\_

Use arrows and words to show how energy was transferred in this toy. You can use as many of the shapes as you need for your map. You can also draw more shapes if you need them.



### Energy Forms

Electrical Chemical Motion Elastic Gravitational Heat Light Sound

Date: \_\_\_\_\_

## Exploring How Well Different Materials Slow Heat Energy Transfer

**Investigative Question:** Do some materials slow the transfer of heat energy better than others?

**Predictions:**

The \_\_\_\_\_ will slow the transfer of heat energy the most,

then the \_\_\_\_\_

and then the \_\_\_\_\_.

The \_\_\_\_\_ will slow the transfer of heat energy the least.

**Materials:**

- Plastic bottle with cap
- Test material (aluminum foil, foam, plastic wrap, or polyester batting)
- 3 rubber bands (optional)
- Piece of masking tape
- Warm water
- Resealable plastic bag
- Thermometer
- Container of ice water
- Stopwatch, or a watch or clock with a second hand