

Learning Target: I can describe and explain the differences between static electricity and human-harnessed electricity.

### Static Electricity vs. Human-Harnessed Electricity Interactive Activity

#### Instructions:

1. Observe the pictures below carefully.
2. Answer the questions that follow each section.
3. Be ready to discuss your answers in class!

#### Part 1: Static Electricity

Image 1



Image 2



#### Questions:

1. What caused the balloon to stick to the child's hair?
  - a. Magnetic force
  - b. Static electricity
  - c. Human-harnessed electricity
2. Why does rubbing the balloon create static electricity?
  - a. It adds heat to the balloon.
  - b. It transfers electrons between the balloon and the hair.
  - c. It produces sound energy.
3. Write down one example of when you have experienced static electricity in your daily life:

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## Part 2: Human-Harnessed Electricity

Image 1



Image 2



### Questions:

4. How is human-harnessed electricity generated in the image of the wind turbine?

- a. Using chemical reactions
- b. Using moving air to turn blades
- c. Using a battery

5. What allows the light bulb to glow?

- a. Static electricity
- b. Current electricity flowing through wires
- c. Electrons stopping inside the bulb

6. Name one way you use human-harnessed electricity in your daily life: \_\_\_\_\_

## Part 3: Compare and Contrast

Write or drag and drop the description number in the **Chart** below to compare **static electricity** and **human-harnessed electricity**.

| Static Electricity | Both | Human-harnessed Electricity |
|--------------------|------|-----------------------------|
|                    |      |                             |
|                    |      |                             |
|                    |      |                             |
|                    |      |                             |

|                            |                               |                                                             |                          |
|----------------------------|-------------------------------|-------------------------------------------------------------|--------------------------|
| 1. Needs a circuit to flow | 2. Form of energy             | 3. Steady flow of electrons                                 | 4. Do not need a circuit |
| 5. A buildup of electrons  | 6. Constant flow of electrons | 7. Electrons stay in one place until they jump to an object | 8. Needs a conductor     |

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**Bonus Activity:**

**Lightning**



**Power Lines**



1. How does lightning differ from the electricity flowing through power lines? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Which one is safer to use? \_\_\_\_\_ Explain why. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_