# Home Letter

HMH into Science Texas

Dear Parent or Guardian,

Your child is now beginning TEKS 5.8, "Energy." Read more to find out what your child is exploring!



## What We're Doing

What makes a flashlight "light"? What other forms of energy can electrical energy be transformed into? What happens to light when it hits different objects?

**By the end, your child will be able to**

- demonstrate how energy is transformed as it moves through a flashlight system
- describe electrical currents moving through circuits
- demonstrate how light travels in a straight line and can be reflected, refracted, or absorbed when it encounters different media

## At-Home Activity

**To prepare your child for TEKS 5.8, try this short activity:**

- Place a coin at the bottom of a bowl. If possible, secure it with some clay or other adhesive putty. Push the bowl just far enough away until the coin cannot be seen.
- Slowly fill the bowl with water until the coin is visible.

**Engage your child by asking these questions:**

- What changes in a flashlight system when the switch is pushed?
- Why does pouring water into the bowl make the coin visible?

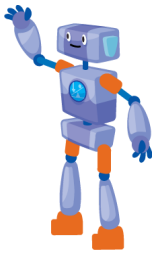
## Helpful Resources

HMH Ed Online


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Log on to *Ed* to

- download lesson PDFs
- interact with the digital lesson
- explore the FUNomenal Reader *Let's Explore How Energy Changes Form*



## Science Summary

**Vocabulary** for this topic includes *chemical energy, electrical energy, energy transformation, circuit, electrical current, electrical energy, absorb, light, reflect,* and *refract.*

- A flashlight's battery contains chemical energy. This gets transformed into electrical energy in the wires and into light energy in the bulb.
- Electrical energy is energy that is caused by the movement of electric charges. Electric current is the flow of electrically charged particles along a path. For a circuit to have an electric current, the circuit must have a source of energy and be completed.
- Light is a form of energy. Light travels in a straight line, and when light hits an object, the light can be reflected, refracted (bent), or absorbed.

## Misconception Alert!

If your child has one of these misconceptions, here's how you can help.

- **Misconception 1: A battery has electricity inside it.**

To address this, tell your child that a battery is like their heart. Their heart moves blood through the body. A battery moves, or "pumps," the electrons, which are already inside the wires, through the circuit.

- **Misconception 1: Things "use up" energy.**


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To address this, have your child look around the room and identify an example of energy such as a fan blowing air. Explain that the energy is not being “used up” but is being transformed to make the fan move and the motor get hot.

## Teacher Comments

[Teacher insert text here for Parents and Guardians]

Thank you for supporting your child’s education.

Sincerely,

[Teacher]


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