

# USING DIFFERENT FORMS OF ENERGY

## Uses of Energy



Sailors use lighthouses to keep them from running their boats into land. What are some other ways we use light energy to prevent accidents?

## Uses of Energy



What form of energy is being used to create the breeze?

## Uses of Energy



This tool is used to listen to a person's heartbeat. Discuss some other tools or objects we use that involve sound energy.

## Uses of Energy



What form of energy is being used to cook the hotdog? What other form of energy is present?

*24 Discussion Cards*  
Two Teaching Taylors



# About Us

We are so excited to share our classroom resources with you. Thank you for your purchase and for supporting our store.

We met in college, married shortly after, accepted teaching positions in different districts in the Fort Worth, TX area, and now have twin daughters that make our life an adventure.

## Education/Credentials

**Tammy:** Bachelor of Arts Interdisciplinary Studies in 4-8 grade Math and Science

**Marquise:** Bachelor of Science Interdisciplinary Studies in 4-8 grade Math and Science; Masters in Curriculum and Instruction in Math and Science

## Let's Connect



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# TABLE OF CONTENTS

**PAGE 4 FUN IDEAS FOR USING THIS RESOURCE IN YOUR CLASSROOM**

**PAGE 5 PRINTING TIPS FOR COLOR TASK CARDS**

**PAGES 6-11 FRONT AND BACK OF 24 COLOR DISCUSSION CARDS**

**PAGE 12 TERMS OF USE AND CREDITS**

# FUN IDEAS FOR USING THIS RESOURCE IN YOUR CLASSROOM:

Use these comprehensive discussion cards to help students access and use their content knowledge that has been previously taught. These cards are a great way to formatively assess students and offer re-teaching for misunderstandings.

- **Talk and Trade**

Give each student a card and have them walk around the room while you play music. When the music stops, they find a partner and discuss the questions on their cards. When finished, they trade cards and wait silently for the next round to begin.

- **Scoot**

Assign each card a number and post around your room. Have students scoot from question to question with a partner. This can be an activity for review or you can require students to write down their answers so you can assess them.

- **Write, Share, Discuss**

Groups of 4 take turns choosing cards from a stack and reading to the group. They answer individually on a white board and share answers when everyone is done. If they all agree, they can move to next question. If they do not agree, they must take out science notebooks and support their answers.

## Notes:

- this resource was not created as a matching activity and may be difficult for students to be successful if used in this way
- The answers on the back of each card may not be the only correct answer. Remind students to use them only as a coaching tool when discussing with their peers. If you have a preferred answer than you want your students to use, you can print the cards without the suggested answers on the back.

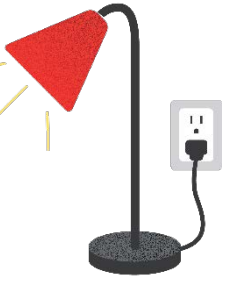
# PRINTING TIPS:

Print the following color slides on white or pale neutral cardstock.

- Select “shrink oversized pages” to ensure that the page prints centered.
- Select “flip on long edge” when printing 2-sided

## Uses of Energy

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List 3 forms of energy in this picture. Are all 3 forms of energy needed to use this lamp?

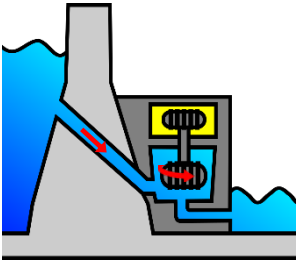
## Uses of Energy



Describe how this guitar makes music. What forms of energy are involved?

## Uses of Energy

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What form of energy is spinning the turbines in order to generate electricity?

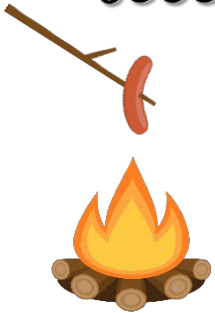
## Uses of Energy



This lantern burns oil to keep the flame lit. What types of energy are given off?

## Uses of Energy

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What form of energy is being used to cook the hotdog? What other form of energy is present?

## Uses of Energy



The skin on this drum vibrates when hit with the drumstick. What form of energy is used?

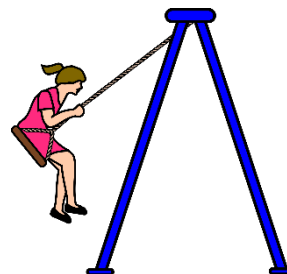
## Uses of Energy

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Describe how thermal energy might affect this ice cream cone.

## Uses of Energy



Describe the different ways that mechanical energy is present as the girl swings.



The guitar strings vibrate when plucked, which creates a sound that we can hear. Both mechanical and sound energy are present.

Light energy, thermal energy, and electrical energy. The thermal energy is NOT needed in order to use the lamp.

The lamp gives off both light and thermal energy.

The water moves through the dam and spins the turbines. Since the water is MOVING, that means it is using mechanical energy.

You use mechanical energy to hit the drum with the drumstick.

Thermal energy is cooking the hotdog. Light energy is also present.

Mechanical energy is present as the girl pumps her legs and as the swing moves back and forth.

Thermal energy will slowly melt the ice cream. This means it will change states of matter, from a solid to a liquid.

## Uses of Energy



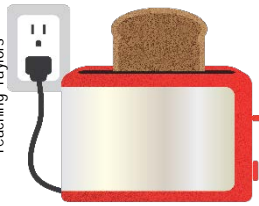
How many forms of energy are needed to use these toys? Name it/them.

## Uses of Energy



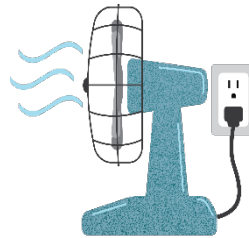
What form of energy is being collected by the panels on this house. What form of energy will it be turned into?

## Uses of Energy



Explain how different forms of energy are being used to make toast. Are any forms of energy created that are not needed?

## Uses of Energy



What form of energy is being used to create the breeze?

## Uses of Energy



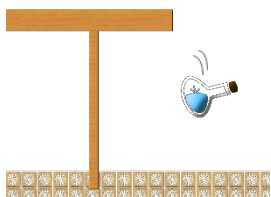
What forms of energy are given off by a lit light bulb?

## Uses of Energy



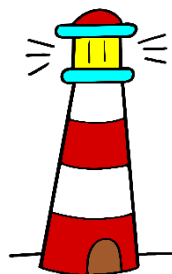
Identify at least 3 things you use that have the same source of energy as this microphone.

## Uses of Energy



Explain how mechanical energy is involved in this picture.

## Uses of Energy



Sailors use lighthouses to keep them from running their boats into land. What are some other ways we use light energy to prevent accidents?



Solar energy, a form of light energy, is being collected. The light energy will be converted (changed) into electrical energy.

Mechanical energy is the only form of energy needed.

The fan is using electrical energy but it is the mechanical energy of the spinning blades that is creating the breeze.

The toaster uses electrical energy to heat coils inside the toaster. The heated coils give off thermal energy. When the coils are really hot they will glow, this is an example of light energy. The light energy is NOT needed to make toast.

Cell phones, microwaves, televisions, radios, hair dryers, refrigerators all plug into wall outlets. They use electrical energy.

A light bulb gives off both light and thermal energy.

Headlights on cars make it easier to see at night. Stoplights let everyone know whose turn it is to go through an intersection. Light reflectors on bikes help drivers see bike riders at night.

Mechanical energy is the energy of movement or the possibility of movement. This bottle is falling so it has mechanical energy.

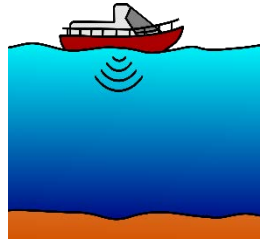
## Uses of Energy



Describe 3 ways that you use light energy in your everyday life.

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## Uses of Energy



This boat uses sound waves and echoes to find things they can't see. Discuss animals in nature that use sound waves in a similar manner.

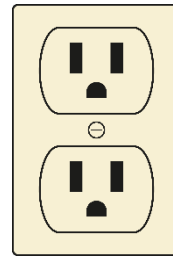
## Uses of Energy



This tool is used to listen to a person's heartbeat. Discuss some other tools or objects we use that involve sound energy.

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## Uses of Energy



Describe 3 ways that electrical energy makes it easier to learn and do school work in school.

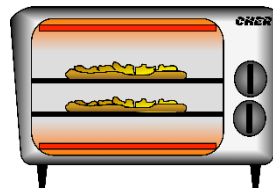
## Uses of Energy



Wind turbines collect mechanical energy in wind to make electricity. What are 3 things you use that have or use mechanical energy?

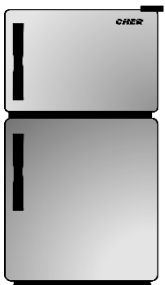
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## Uses of Energy



This toaster oven can quickly make snacks. What are 3 things you use that use thermal energy to make life easier?

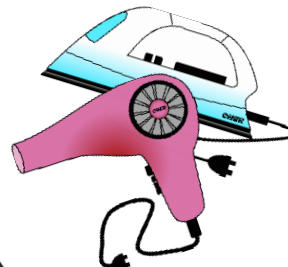
## Uses of Energy



Discuss all possible forms of energy that may be associated with a refrigerator.

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## Uses of Energy



What forms of energy do this hair dryer and clothes iron have in common?

Bats, whales, and dolphins are a few examples of animals that use sound for echolocation.

Sunlight makes it easier to play and work outside, cell phones and tablets display light energy, and we can stay up after dark using lightbulbs to help us see.

The projector, pencil sharpener, computers, and lights all use electrical energy. The cafeteria uses electricity to store and prepare food.

A radio, television, walkie-talkie, telephone, seismograph for earthquakes, and ultrasound for imaging the human body are all tools or objects that involve sound energy.

Hair dryers, clothes dryers, stoves, heating systems for our house, and water heaters are all examples of ways we use thermal energy to make our lives easier.

A bicycle, car, blender, rocking chair, tooth brush, skate board, and ceiling fan all have or use mechanical energy.

Both items use electrical energy and both convert (change) the electricity into thermal energy.

Mechanical: doors open and close  
Electrical: it plugs into an outlet  
Light: a light comes with open door  
Thermal: reduced thermal energy  
Sound: door beeps if left open



# DID YOUR STUDENTS LOVE THESE DISCUSSION CARDS?

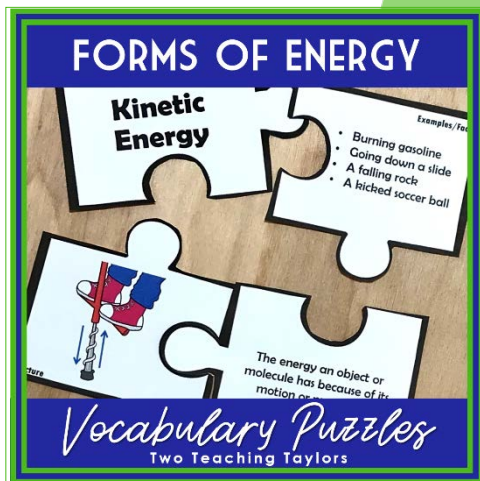
We have an entire line of science discussion cards created just for upper elementary students. You can purchase the bundle at a significant savings over purchasing the sets individually.

Click the image below to preview the bundle.



# Related Resources

Click on the pictures below to take a peek at some resources related to this one.



## Let's Connect



## Clip Art & Font Credits

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