

**Electrical Circuits**  
Energy Transformations

Correlation

Fountas & Pinnell	O	★
DRA	34	
Estimated Lexile Measure	625	

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Maria and Darrell went to Sasha's house for dinner. Sasha's mom was making macaroni and cheese. When they got there, Sasha's dad was lying on the kitchen floor. His head was under the sink.

"What's wrong, Mr. Brown?" asked Maria. Is the garbage disposal broken?"

"Yes, Maria," said Mr. Brown. "I think I see the problem. I need more light under here. I need to see better.

"Where is your flashlight?" asked Maria. "I'll go get it."

"Thank you, Maria. It is next to my toolbox," said Mr. Brown. "Sasha is downstairs watching television. Go tell her you are here. Then you can help."

"I'll be back in a minute," said Maria.



"We will help too," said Maria and Sasha. "We have a lot of energy!"

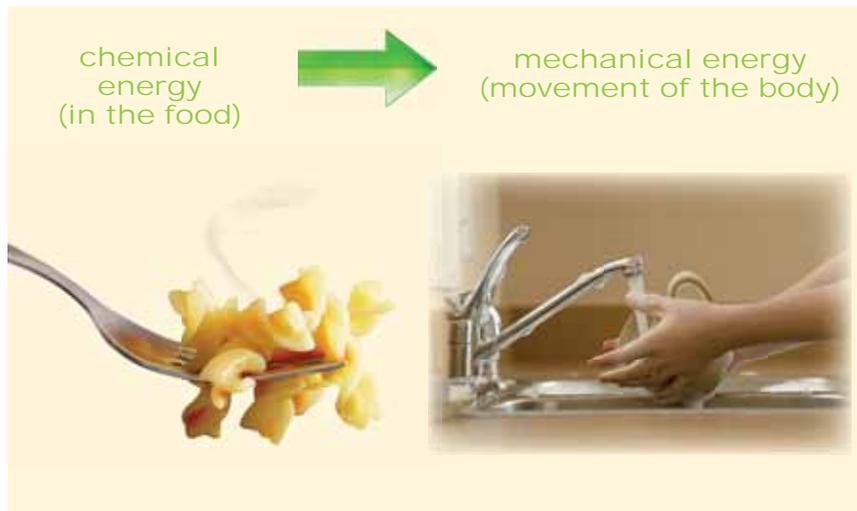
"Sasha, your friends can come to our house anytime," said Mrs. Brown.

"I agree," said Mr. Brown.

The three friends smiled at each other as they helped clear the table.



"I can think of a tasty energy change!" said Darrell. "It is the macaroni and cheese! Our bodies use the chemical energy in food. It gives us energy to do things. We need energy to walk. We need energy to grow. We even need energy to do the dishes. Do you need help cleaning the dishes, Mrs. Brown?"



Darrell and Maria went downstairs. Sasha and her mom were watching television.

"Hi Sasha and Mrs. Brown," said Maria. "Supper smells good. I am starving!"

"Me too," said Darrell.

"Supper will be ready soon," said Mrs. Brown. "Come watch TV with us."

"I will. Maria is going to help Mr. Brown," said Darrell.

"I am going to hold the flashlight for him," said Maria.

"How nice," said Mrs. Brown. "Here is the flashlight. The batteries are new."



Maria took the flashlight from Mrs. Brown. She walked to the kitchen.

"I have the flashlight, Mr. Brown. Can I hold it for you?" asked Maria.

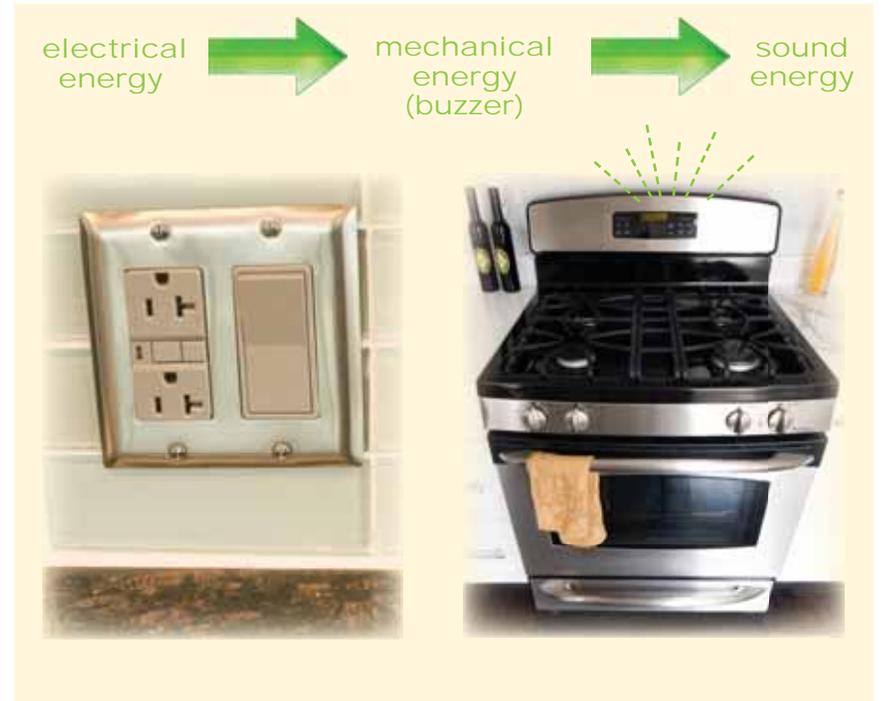
"Yes," said Mr. Brown. "I know what is wrong. I need to tighten this screw."

As Maria held the flashlight, Mr. Brown fixed the garbage disposal. He got up and flipped the switch. The garbage disposal worked.

"That fixed it," said Mr. Brown. "Thanks for your help."



"What about the oven buzzer?" added Sasha. "Electrical energy changed to mechanical energy, then to sound energy."



"I can think of another change," said Darrell. "Mrs. Brown cooked this dinner in the oven. The oven used the chemical energy from the natural gas. It changed it to heat energy to cook the food."

chemical energy  
(natural gas) → heat energy  
(oven)



Just then they heard the oven timer buzz. The macaroni and cheese was done.

"Dinner is ready, Maria," said Mr. Brown. "Please let Mrs. Brown know."

"OK, Mr. Brown," said Maria. "I'm hungry."

Everyone sat down at the table. Mrs. Brown's macaroni and cheese looked good.



"Mom, you are the best cook in the world," said Sasha.

"Thank you for inviting Maria and me for dinner," said Darrell.

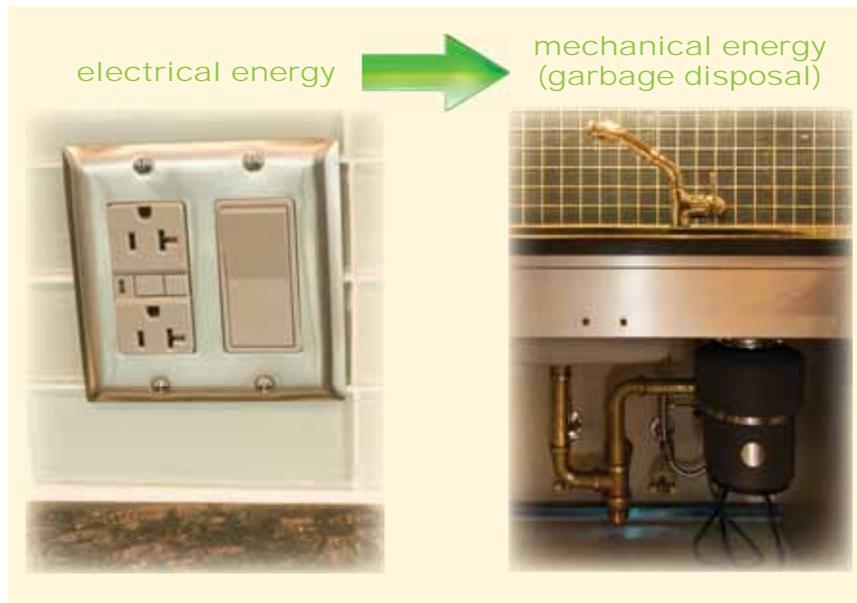
"You're welcome, Darrell," said Mr. Brown. "And Maria, thank you for your help."

"What was wrong with the garbage disposal?" asked Mrs. Brown.

"I needed to tighten a screw and push the reset button," said Mr. Brown. "Then it worked great."

"We are learning about changing energy forms in science class," said Sasha. "The garbage disposal is an example."

"You are right, Sasha," said Mr. Brown. "The garbage disposal changes electrical energy to mechanical energy. Can you think of any other energy transformations?"



"There is the flashlight," said Maria. "The chemical energy in the batteries changes to electrical energy. The electrical energy lights the light bulb. The bulb gives off light energy."

