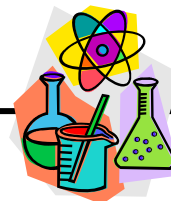
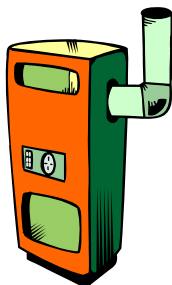


# Grade 9 Unit D: Electrical Principles and Technologies



## Energy Inputs and Outputs

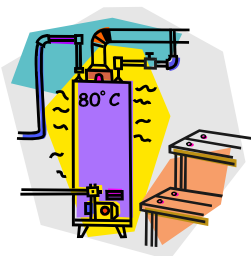
1. Identify the forms of energy inputs and outputs for the following household devices.



**furnace**

Inputs: \_\_\_\_\_

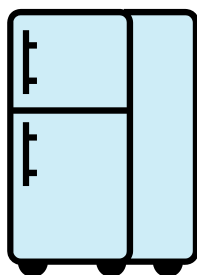
Outputs: \_\_\_\_\_



**hot water heater**

Inputs: \_\_\_\_\_

Outputs: \_\_\_\_\_



**refrigerator**

Inputs: \_\_\_\_\_

Outputs: \_\_\_\_\_



**wood stove**

Inputs: \_\_\_\_\_

Outputs: \_\_\_\_\_

2. For the household devices listed in the previous question, compare the inputs and outputs. How much energy or fuel does it take to use the device? How much heat or cooling do you get for that energy or fuel?

	Comparison of the Input and Output
furnace	
hot water heater	
refrigerator	
wood stove	

3. In a group, discuss the following question:

**How can household devices use less energy to create the same output?**

Summarize key points from your discussion below.

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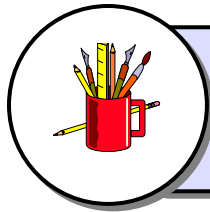
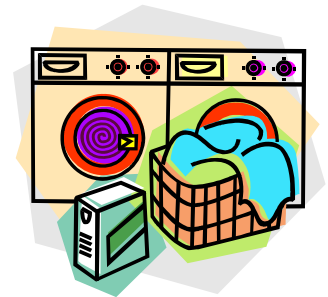
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4. Investigate and describe what an “Energy Star®” rating means and how devices qualify.

5. Investigate and create a brochure called “Ten Ways to Save Energy at Home”. Include ten tips for saving energy, such as using energy-efficient products such as energy-efficient light bulbs and front-loading washing machines.

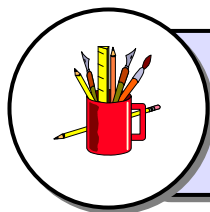


Use Tool [Preparing for an Internet Search](#)

6. Create an action plan that describes what can be done to save electricity in your household, school or workplace.

Examples:

- Turn off lights.
- Turn off the television when you are not watching it.



Use Tool [Action Plan Template.](#)