

Subject: Integrated science

Topic: Forms of energy and energy change

Level: S.1

Learning objectives:

1. Content

Students should be able to:

Identify forms of energy stored and produced in different ways.

Identify the energy changes which occur in different

Identify the energy converter in energy change processes

2. Language

Students should be able to:

Use passive verbs to describe energy change

This activity was produced by a Leung Ka Po

Activity adapted from: --

S.1 Integrated Science

Energy

Energy converters

Worksheet 3

Name: _____ Class: _____ No.: _____ Date: _____

Energy conversions

Energy conversion means *energy change*. Energy can be *converted* (changed) from one form to another.

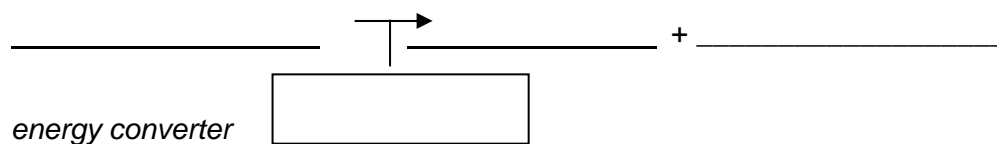
Energy converters

The machine or tool, by which one form of energy can be converted to another is called an *energy converter*.

Activities

1. Close the switch of the electric circuit with a light bulb.

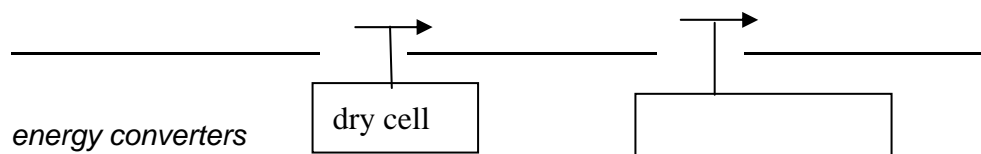
Energy conversion



The _____ converts _____ energy to _____ energy. The _____ is an energy converter.

2. Close the switch of the electric circuit with a motor.

Energy conversion



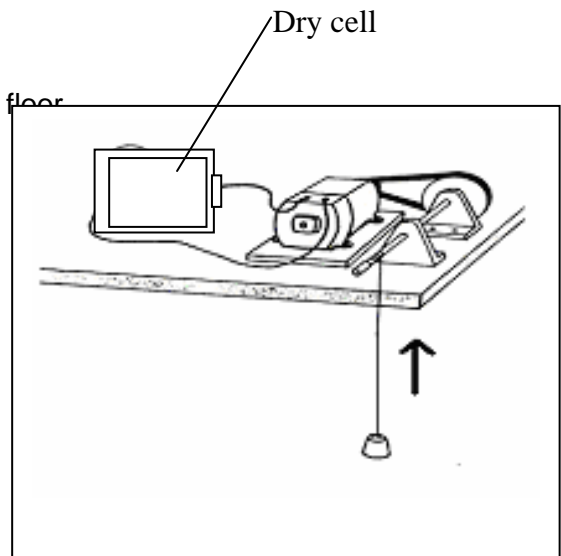
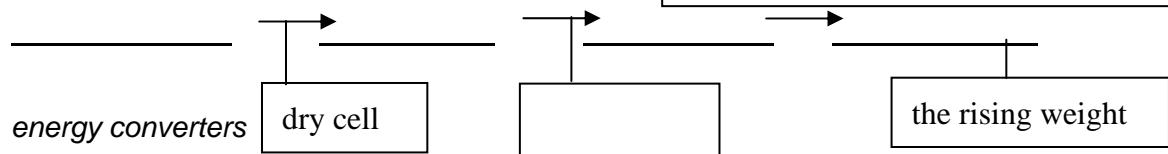
The _____ converts _____ energy to _____ energy.

Then the _____ converts _____ energy to _____ energy.

3. Close the switch of the electric circuit with a dry cell and a motor to which a weight on the floor is tied.

What do you observe?

Energy conversion



Write a short paragraph to describe the energy conversions shown above.

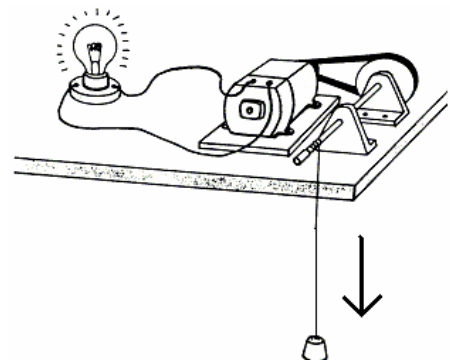
Chemical energy is converted to _____ energy by the energy converters.

The _____ first converts _____ energy to _____ energy.

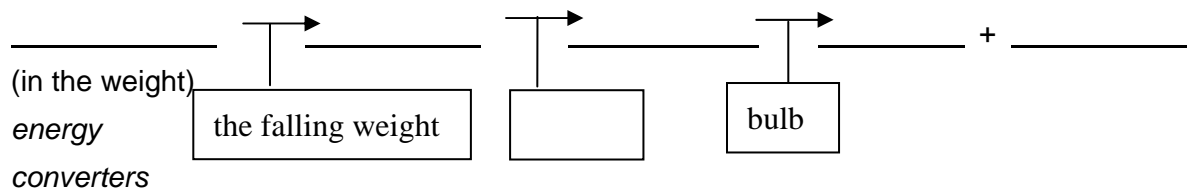
Then the _____ converts _____ energy to _____ energy.

Lastly, the _____ converts _____ energy to _____ energy.

4. Close the switch of the electric circuit with a light bulb and a dynamo to which a weight on the bench is tied.
- What do you observe?



Energy conversion



Write a short paragraph to describe the energy conversions shown above.

Potential energy is converted to _____

The _____ first converts _____

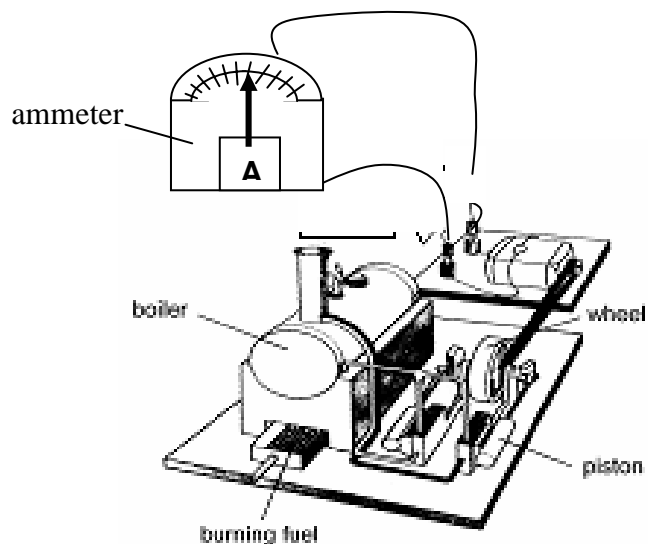
Then _____

Lastly, _____

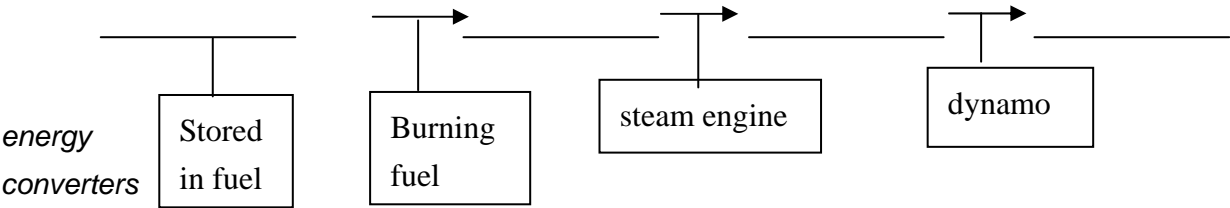
5. The wheel of steam engine is connected to the ammeter.

Burn the fuel to heat up the water. When the water in the boiler boils, open the valve.

What happens to the pointer of the ammeter?

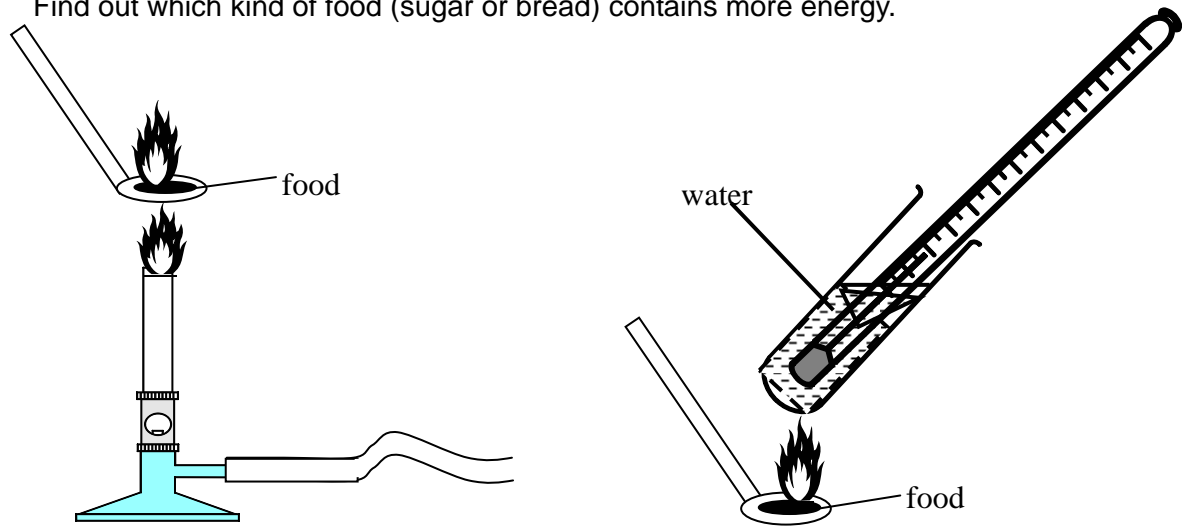


Energy conversion



Write a short paragraph to describe the energy conversions shown above.

6. Food can give us energy and keep working.
Find out which kind of food (sugar or bread) contains more energy.



	Temperature (°C) before experiment	Temperature (°C) after experiment	Temp.change (°C)
1 gram of food			
sugar			
bread			

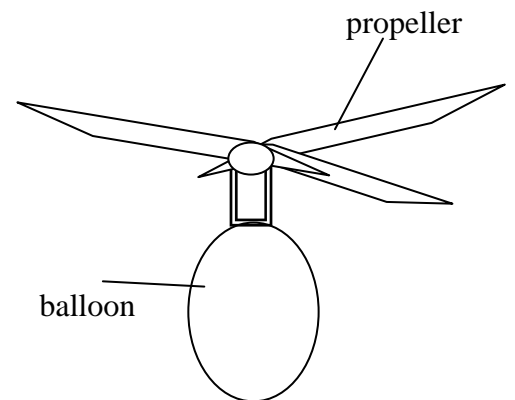
What do you observe?

Which food contains more energy?

Food, fuel and dry cell contain _____ energy.

7. A balloon is blown up and fitted to the propeller.

What happens to the propeller?



The _____ converts
