The National Orthodox School Shmaisani

Science Worksheet #1 / Term 2

Investigating batteries/ Describing electric circuits

Name: __**Answer Key** Grade **8 ( )**

Date: **/02/2023**

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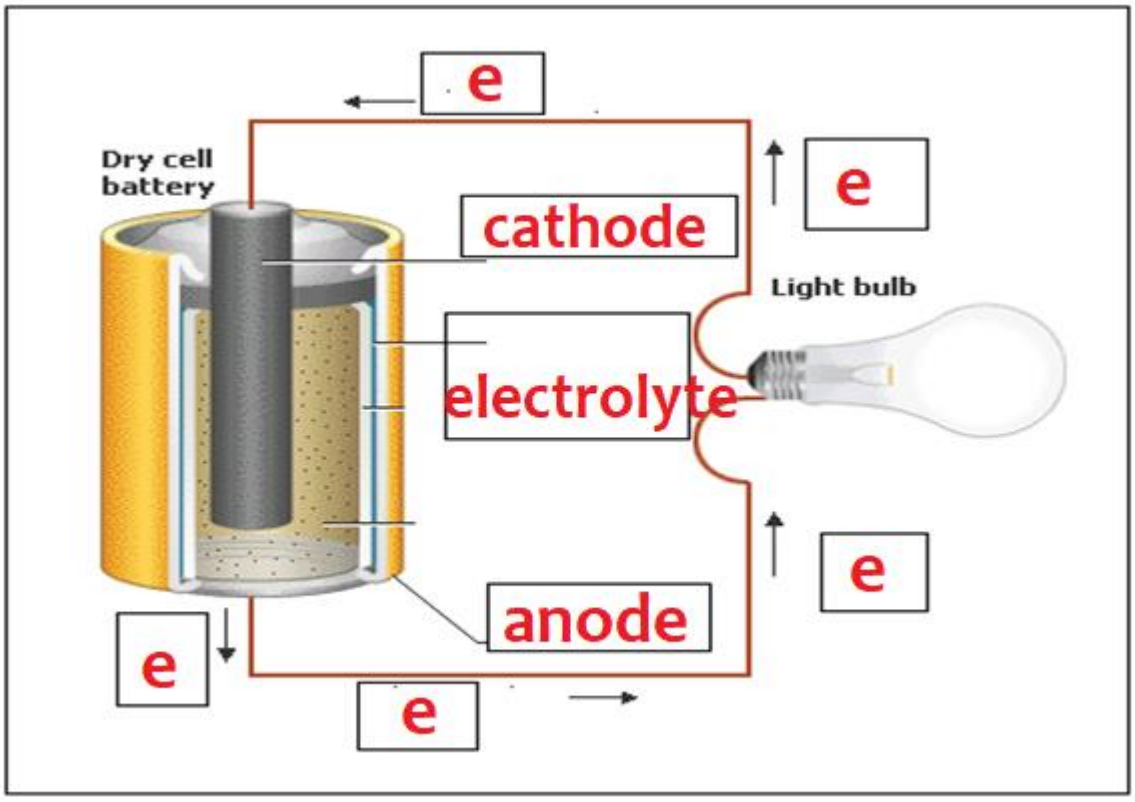
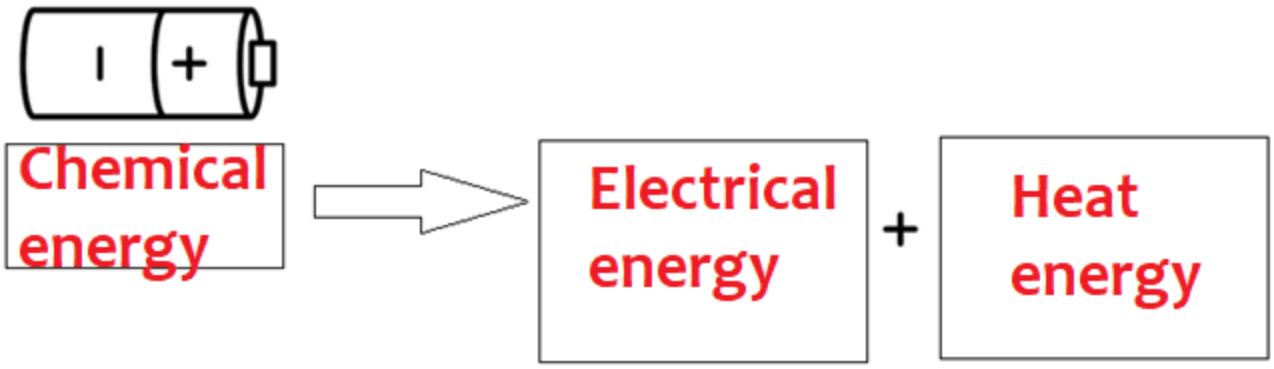
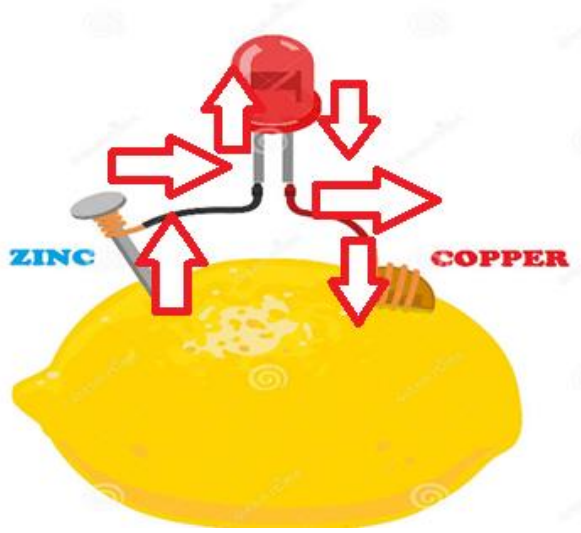
1 – Label the following diagram.



2- Complete the following energy transfer diagram showing changes taking place in a battery.



3- Study the following fruit battery, and then answer the following questions.



a- Draw the flow of the electric current in this battery.

b- The zinc nail represents the: **anode** **cathode**

c- Name the device you would use to measure the voltage across this circuit.

_____**Voltmeter**_____

d- Can you think of other ways of increasing the voltage of a fruit battery?

Increase the juice so use a fruit with more juice.

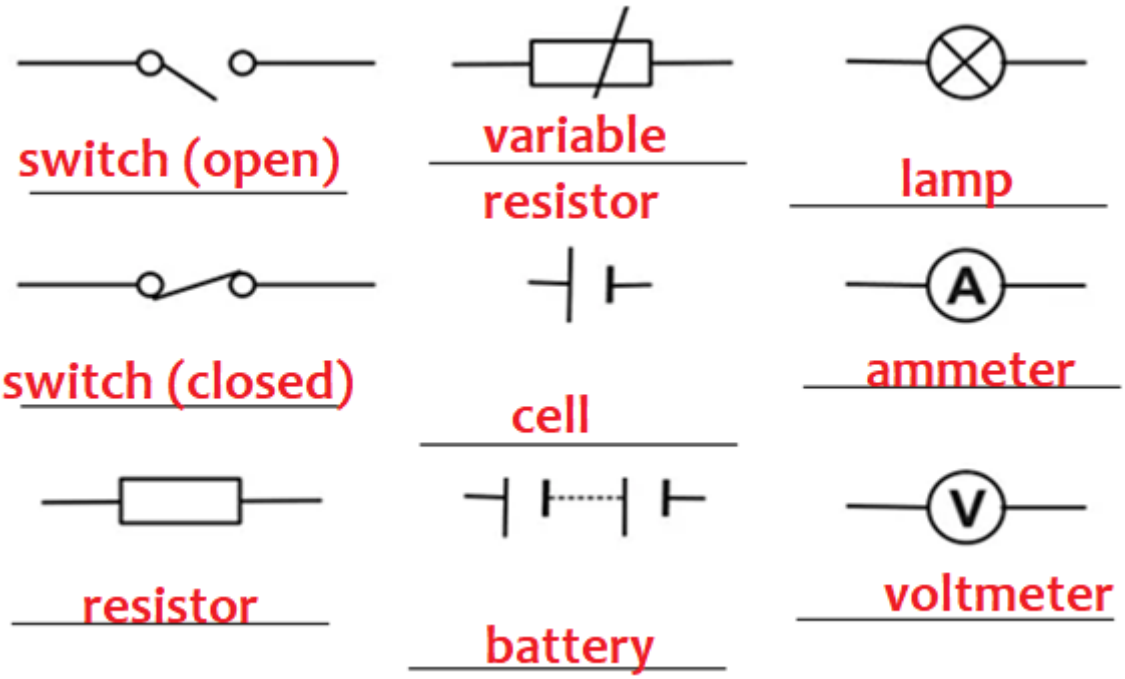
Decrease the distance between the metals

Change the metals

e- Explain the following statement: 'A battery will not work with dried fruit.'

_**The liquid will enable the electrons to move and take part in the chemical reactions.** _____

4- Name the following circuit symbols.



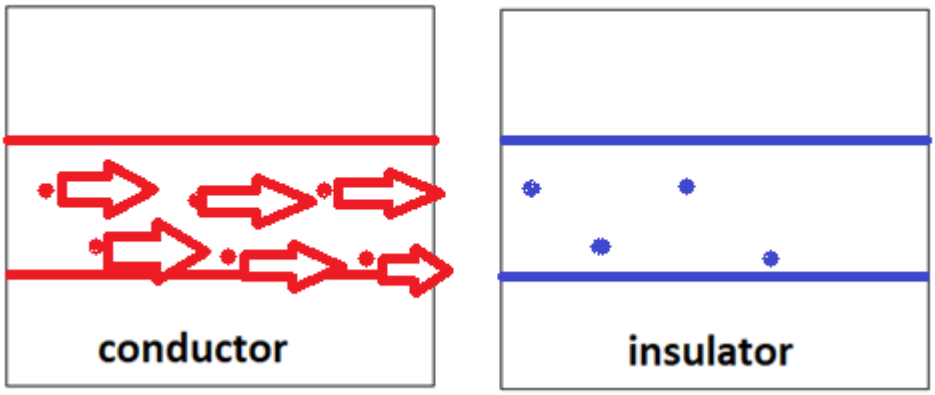
5- Which of the following are likely to be conductors and which will be insulators?

copper	iron	brass	plastic	carbon (graphite)	glass

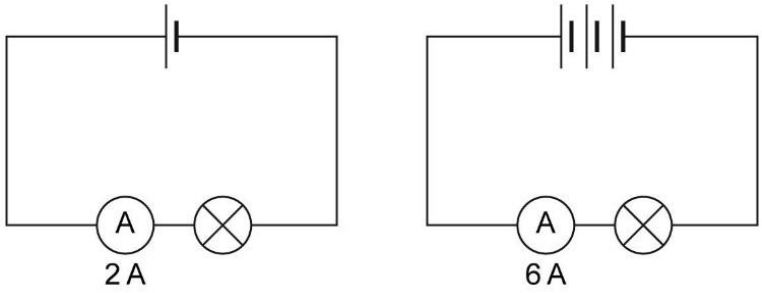
Conductors: copper/ iron/ brass/ carbon

Insulators: plastic/ glass

- **Draw a model to represent an electrical insulator and an electrical conductor, to explain the meaning of these two terms.**



- **Explain the differences in current in the two circuits shown below.**



The second circuit has more cells which means that increasing cells produces larger current.
