UNITED ARAB EMIRATES
MINISTRY OF EDUCATION

الإمارات العربية المتحدة
وزارة التربية والتعليم

Khalifa City A School - Cycle 1

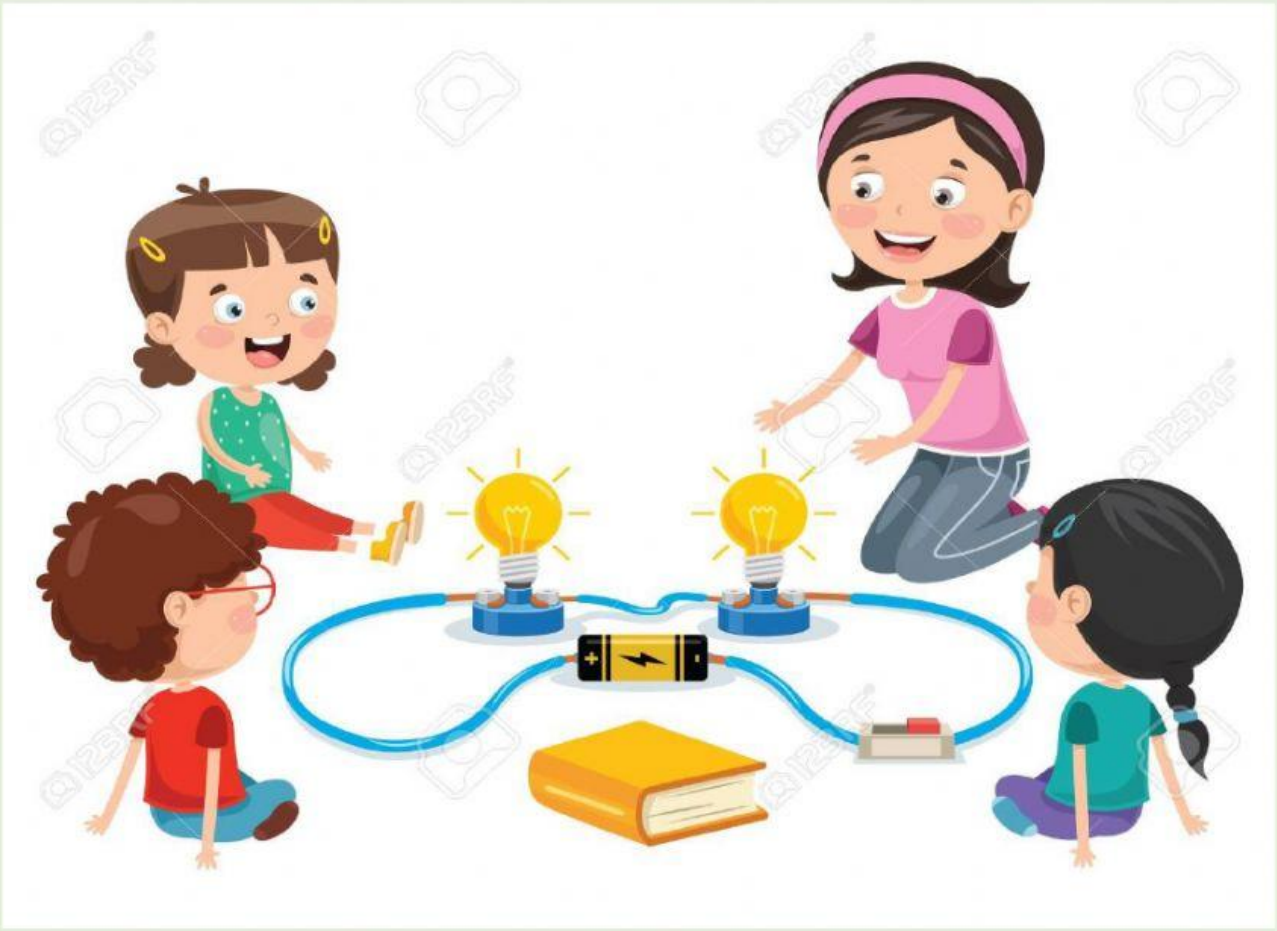
مدرسة مدينة خليفة أ / حلقة أولى

SCIENCE

CHAPTER 7- ENERGY

LESSON 4- ELECTRICITY

PART 2



Created by- Nisha Tanwar

WHAT IS ELECTRICAL CURRENT?

❖ Flow of an electrical charge gives us electricity

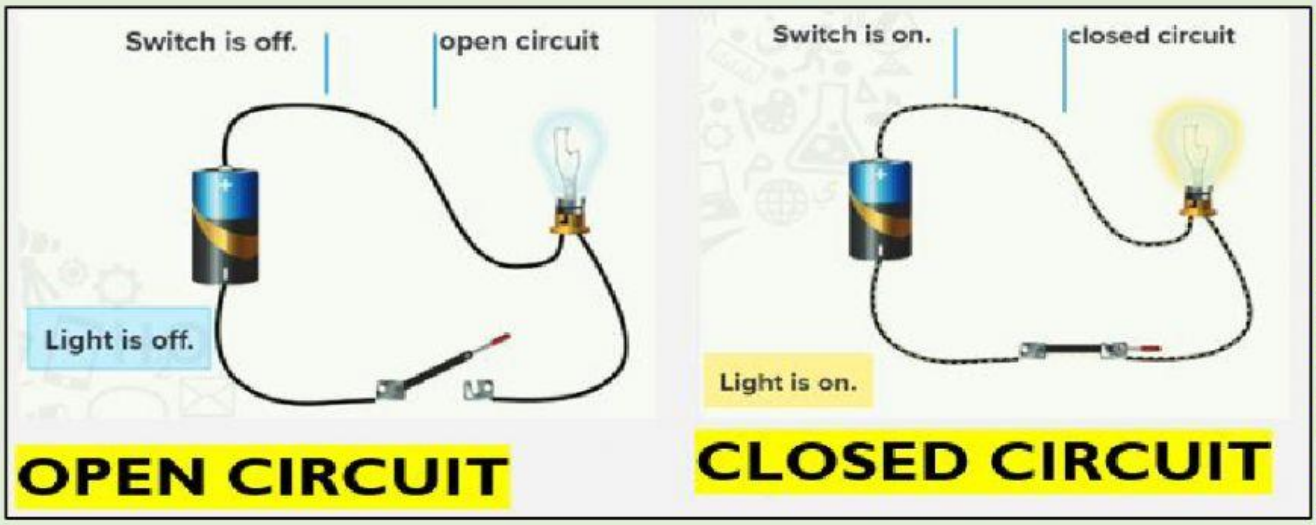
ELECTRIC CIRCUITS

The path along which electrical current flows

WIRES

BATTERY

LOAD

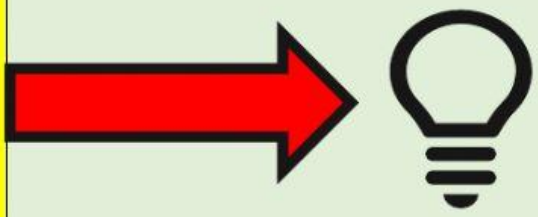


OPEN CIRCUIT

CLOSED CIRCUIT

WATCH VIDEO ABOUT OPEN AND CLOSED CIRCUITS

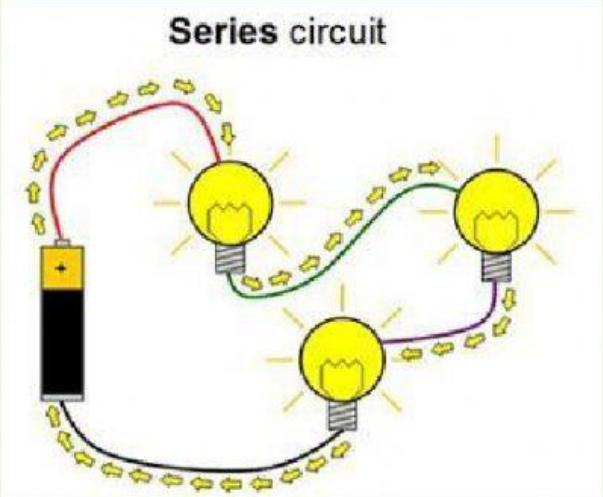
CLICK ON BULB ICON TO CREATE CLOSED AND OPEN CIRCUITS



SERIES AND PARALLEL CIRCUITS

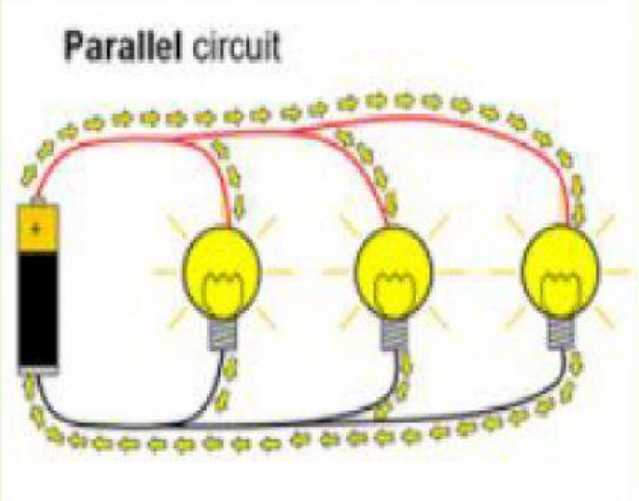
1. Series circuit

Current flows in one path



2. Parallel circuit

Current flows in many paths



CLICK ON BULB ICON TO CREATE SERIES AND PARALLEL CIRCUITS

WATCH VIDEO ABOUT SERIES AND PARALLEL CIRCUITS

HOW CAN WE USE ELECTRICITY SAFELY?

Current flows through a path of little resistance

A fuse is a device that helps prevent short circuits. A fuse has a thin strip of metal in it. The strip has high resistance. If too much current flows through, it heats up and melts. The circuit opens. Current stops flowing.

If a fuse breaks, it cannot be reused.

WATCH VIDEO ABOUT FUSE

Fuses can be used only once, but circuit breakers can be reset. A circuit breaker is a switch that protects circuits. When a dangerously high current flows through it, the switch opens. Current does not flow.

Most homes have circuit breakers.

QUESTIONS FROM BOOK

1. What happens to the circuit when the switch is on? What happens to the light?

_____

_____

2. A parallel circuit has two lightbulbs. One of them burns out. What happens to the other bulb?

_____

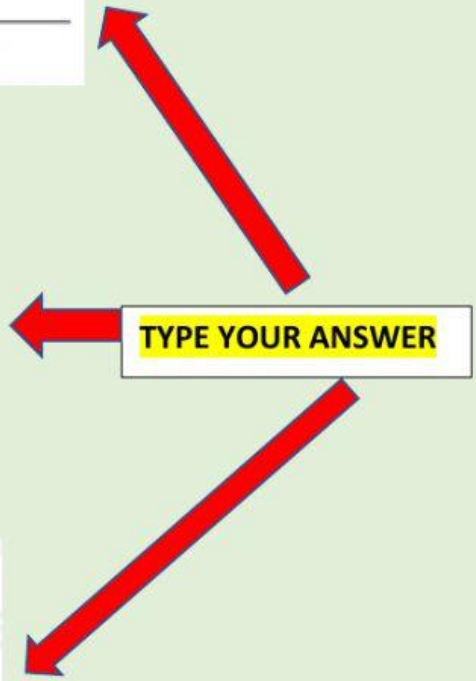
_____

3. In new buildings, circuit breakers are used more often than fuses. Why?

_____

_____

4.



Test Prep. Which has separate paths connecting each load to its power source?

A a short circuit

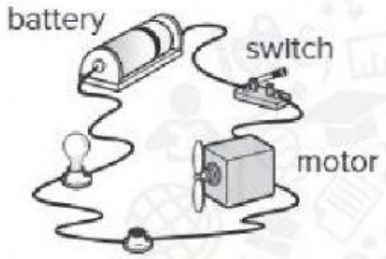
B a circuit breaker

C a series circuit

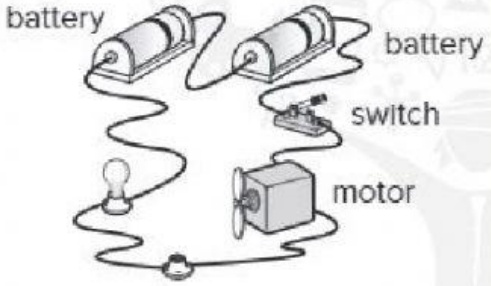
D a parallel circuit

5. In which of the diagrams below could both the lightbulb and the motor function?

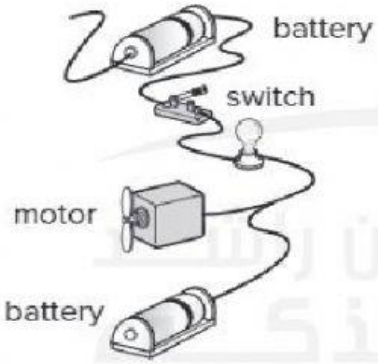
A



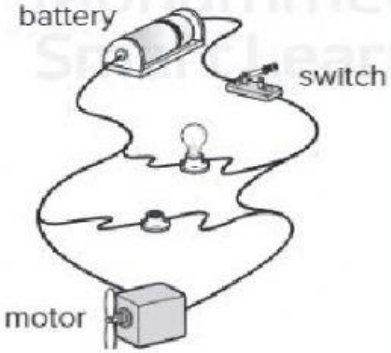
B



C



D



IMPORTANT LINKS FOR PRACTICE

- **Click** here to practice more about circuits
- **Click** here to practice more about series and parallel circuits