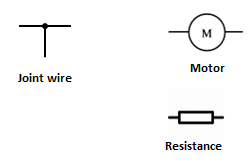
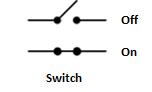
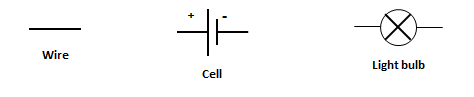
Practical electricity for class 7

**Day 1 : Introduction of electricity and diagram symbols**

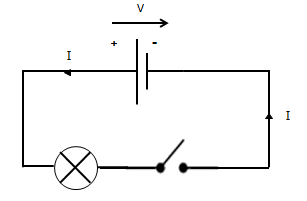
* Introduction by questioning them about what they know about electricity (sources, what is used for, …)
* Presentation of an electrical diagram and why it’s very important. Before wiring anything you need to draw it to avoid any problem with components or your health.
* A drawing need to be understood by everybody, so we need to use symbols known by everyone. Give them some symbols like : a battery, a bulb, a switch (open/close), a wire.



* Do them think about how to light a bulb, just with a battery. The goal is to do them understand what is a loop and why we need a loop if we want it to work. If you don’t have loop electricity cannot flow.

**Day 2 : Wiring a simple circuit**

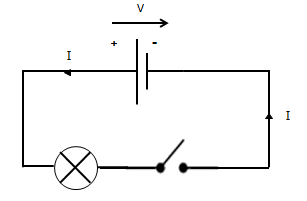
* Reminding about symbols for electrical components. Ask one of them to come to the board to draw the different symbols.
* Take another one and ask him/her to draw a simple circuit with: a battery, a switch and a LED



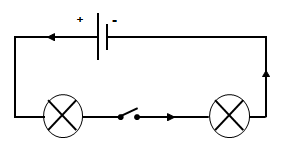
* Create different groups to do practical and do the circuit.

**Day 3 : Wiring a complexe circuit**

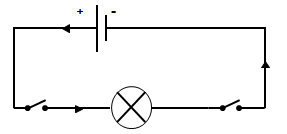
* Reminding about symbols for electrical components, ask one of them to come draw a simple circuit on the board.



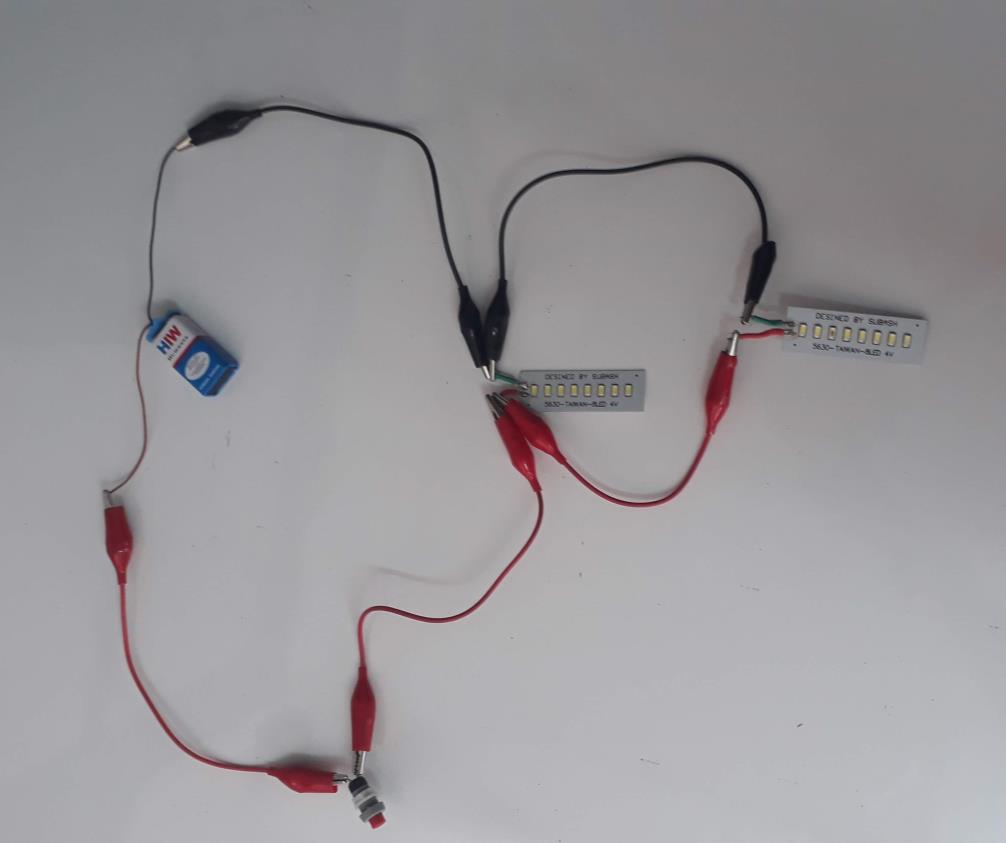
* Ask them to draw an electrical diagram with : 2 Bulbs + 1 battery + 1 switch



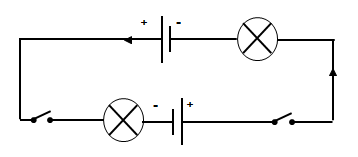
* Ask them to draw an electrical diagram with: 1 battery + 1bulb + 2 switches.



* Do them create the two circuits.

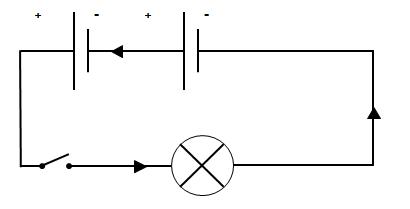
 

* Create a circuit (practical) : 2 batteries + 2 switches + 2 light
* Ask them to draw it on their copies, correct with them.



**Day 4 : introduction of series combination of batteries**

* Ask one of them to draw a circuit with 2 batteries + 1 bulb + 1 switch



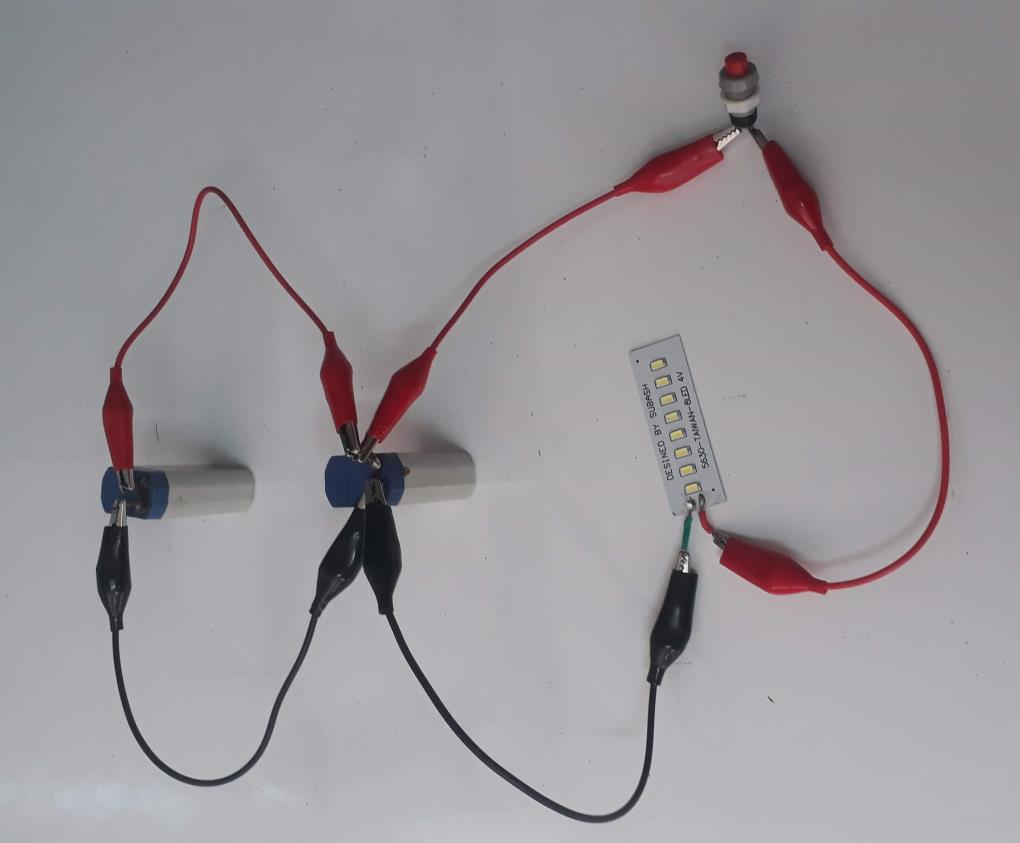
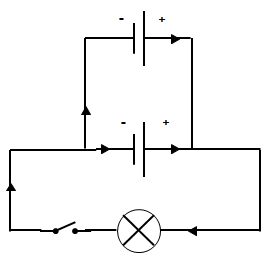
* If we create this circuit what are we expected? Less light, same light or more light?
* By groups (4 or 5 groups) they create the circuit (practical) 🡪 what do you observe? 🡪 More light



* Summarize how to wiring the different batteries if we want to have a series combination : (-) of one battery need to be connect to (+) of the other battery, etc…
* Give them the definition of series combination.

**Day 5 : introduction of parallel combination of batteries**

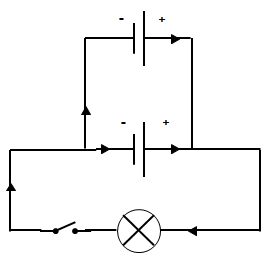
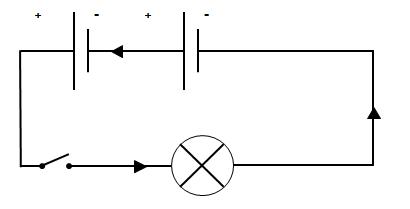
* Reminding that last time they saw series combination of batteries, can they find another way to connect those two batteries? Ask one of them to draw something on the board.
* Correct with them and draw a parallel combination of batteries. What would happen ? less light, same light or more light ?



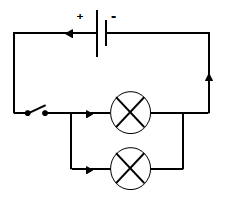
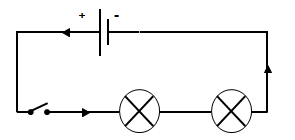
* By groups (4 or 5 groups) they create the circuit in parallel : 2 batteries + 1 switch + 1 bulb.
* What can they observe ? 🡪 Same light
* Summarize how to wiring the different batteries if we want to have a parallel combination : all the (-) need to be connect to the same point and all the (+) need to be connect in the same point.
* Give them the definition of parallel combination.

**Day 6 : Wiring Bulbs in series and parallel combination.**

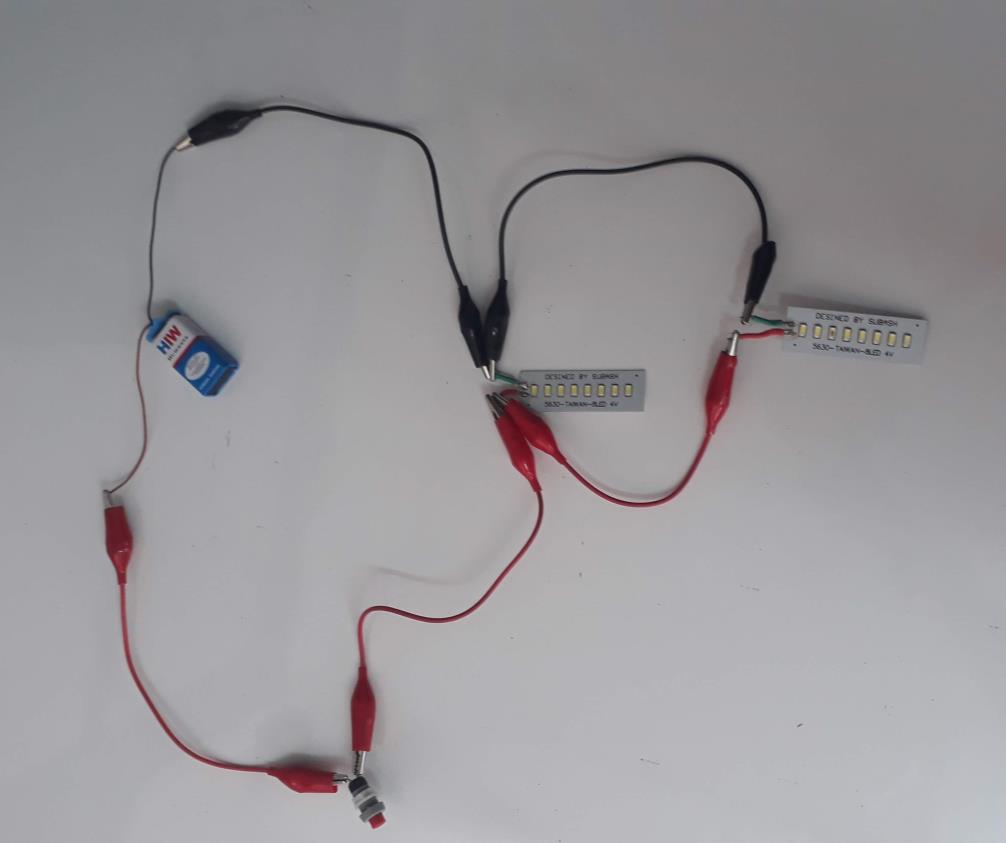
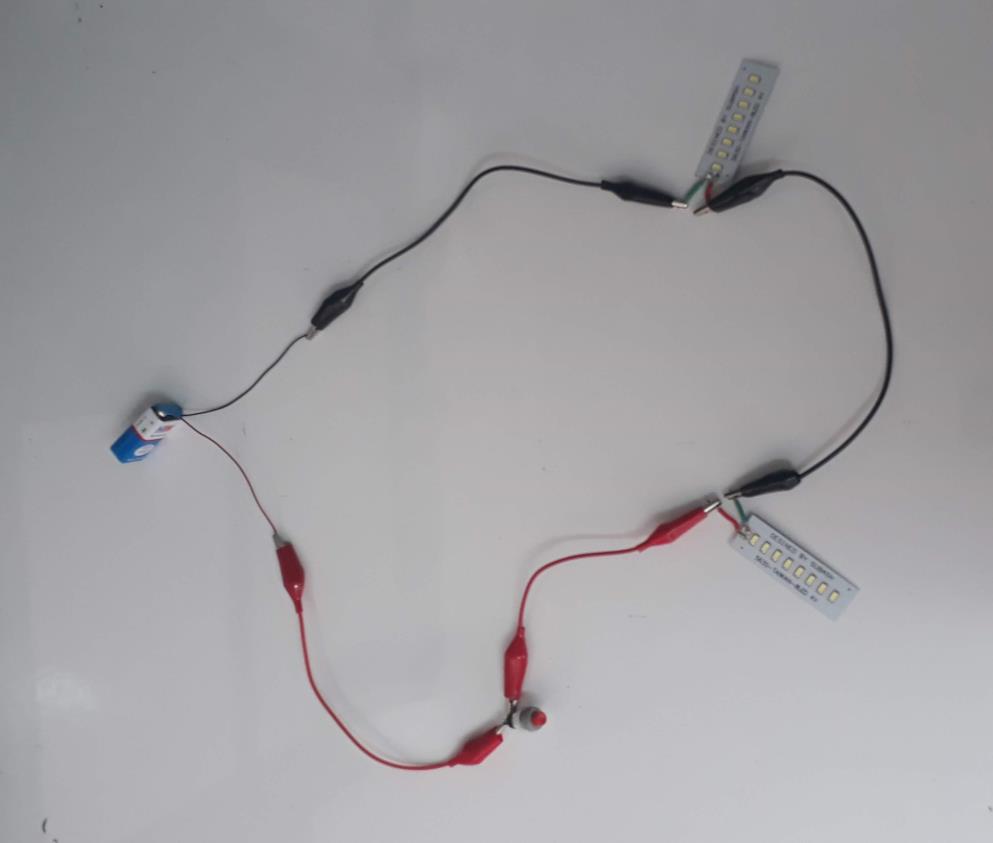
* Reminding the two types of combination we can have in a circuit:
* Parallel combination: draw it and remind the definition
* Series combination: draw it and remind the definition.



* Ask them to draw the same but with 2 bulbs in series and 2 bulbs in parallel.



* What can we expected in each situation: less light, same light or more light?
* By groups (4 or 5 groups) they create:
  + A circuit in parallel combination of bulbs: 1 battery + 1 switch + 2 bulb.
  + A circuit in series combination of bulbs: 1 battery + 1 switch + 2 bulbs

* What can they observe in each situation?
  + Less light if we are in series
  + Same light if we are in parallel
* Conclude on what we saw: if we are in series lights are less bright and if we are in parallel we have the same bright.