

Name: _____

Topic 2: Series & Parallel Circuits



SERIES	Type of Circuit	PARALLEL
	# of pathways	
	Diagram	
	Examples	
	Advantages 	
	Disadvantages 	

ACTION (Use 1.5 V battery)	 SERIES circuit	 PARALLEL circuit
OBSERVATIONS		
Compare the brightness of light bulbs		
What happens when you unscrew 1 light bulb?		
What happens when you open the switch?		
What happens to the light bulbs when you turn the voltage up to 9 V battery ?		
What happens to the brightness when you add a 3 rd light bulb?		
How many paths are there for electrons?		

Follow Up Questions:
Complete the chart but putting a check in the correct column



	Series	Parallel
1. only one path for electricity to follow		
2. more than one path for electricity to follow		
3. all loads (ex. lights) are on or all loads are off		
4. good way to wire a home		
5. loads work or shut off one at a time		
6. appliances share the electricity		
7. an extra bulb makes the others less bright		
8. appliances do not share the electricity		
9. not a good way to wire a home		
10. an extra bulb does not change the brightness of the others		

8) Draw a series circuit with 2 dry cells (battery), two light bulbs.

9) Draw circuit with 2 dry cells (battery) and three light bulbs in parallel.

10) Draw a circuit with 2 dry cells, 3 light bulbs in parallel and a switch that controls only the middle bulb

11) Draw a circuit with a power source that has **2 bulbs in series** and a **third bulb in parallel** to both other bulbs.