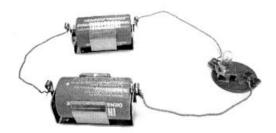
Student Example: Investigating Series and Parallel Circuits

Name	Date_	
Set up the circuits pictured	below and record your o	bservations.
Series Circuit (bulbs in se	eries)	
	0	
4	and a	
	-	
	1800	
(201)		
OMES .	C. S.	
1) What happens? 1+ 119		a diagram showing what you think is going on
2) Do both bulbs light up?_	yes orch	ectrons and protons to make the bulb light.
3) Are there any difference		0
bright they are compared to		南
compared to when there	is only one	ES BU
bulb in a circuit? much		
	<u> </u>	E
 If you remove one of the does the other one still light 		
does the other one sun right	up:	
Parallel Circuit (bulbs in	parallel)	
	Draw	a diagram showing what you think is going on
 What happens? j ← 	/ of ala	ectrons and protons to make the bulb light.
Do both bulbs light up?	VES	
3) Are there any difference		
bright they are compared to	each other?	
bright they are compared to	each other?	
bright they are compared to both have samcompared to when there	each other? <u>brightness</u> is only one	
bright they are compared to beth have samcompared to when there bulb in a circuit? Same	each other? e brightness is only one e brightness	
bright they are compared to both have samcompared to when there bulb in a circuit? Same	each other? e brightness is only one e brightness bulbs,	

Student Example: Investigating Series and Parallel Circuits

Series Circuit (batteries in series)

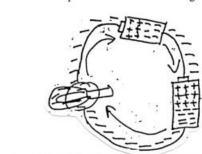


- 1) Does the bulb light? Yes
- 2) Are there any differences in how bright the bulb is compared to when there is only one battery in a circuit?

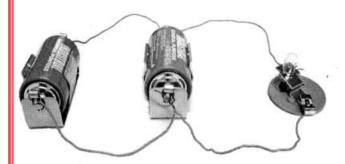
brighter

3) If you remove one of the batteries, does the bulb still light up?

Draw a diagram showing what you think is going on at the level of electrons and protons to make the bulb light.



Parallel Circuit (batteries in parallel)



- 1) Does the bulb light? Ves
- 2) Are there any differences in how bright the bulb is compared to when there is only one battery in a circuit?

Same

3) If you remove one of the batteries, does the bulb still light up? \(\lambda \ell \)

Draw a diagram showing what you think is going on at the level of electrons and protons to make the bulb light.

