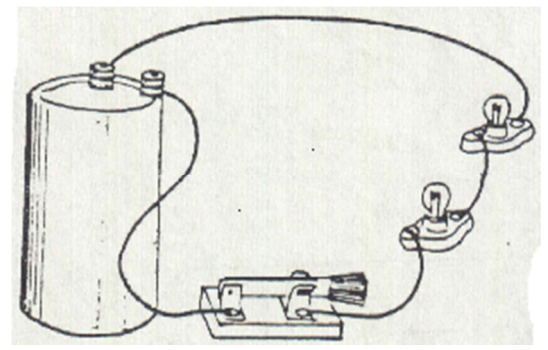


Working With Circuits

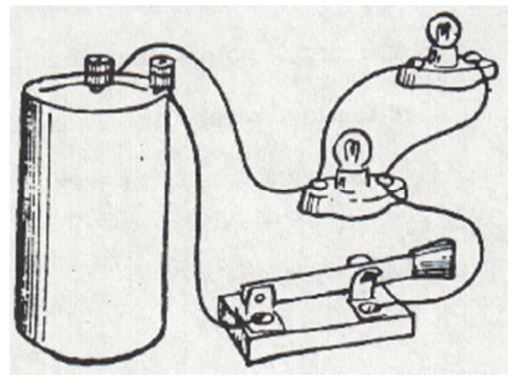
Name Mr. Sudbury - Key Block \_\_\_\_\_ Date \_\_\_\_\_

- 1. What kind of circuit is this? series
- 2. How many paths do the electrons have to follow? one
- 3. How many loads does this circuit have? two
- 4. Is this circuit complete or incomplete? Complete
- 5. Are the loads working? yes



- 6. If one bulb were to burn out, the other bulb would (stay lit, shut off).
- 7. Adding another bulb would make the other two give off (less light, the same amount of light).
- 8. This (is, is not) a good way to wire a home.

- 9. What type of circuit is this? parallel
- 10. How many loads does this circuit have? two
- 11. How many paths do the electrons have to follow? two
- 12. Is this circuit complete or incomplete? Complete
- 13. Are the loads working (will the bulbs light up)? yes



- 14. If one bulb were to go off, the other bulb would give off (more light, the same amount of light).
- 15. Adding another bulb would make each bulb give off (less light, the same amount of light).
- 16. Is this a good way to wire a home? yes

17. What type of circuit is this? Series

18. How many paths do the electrons have to follow?  
one

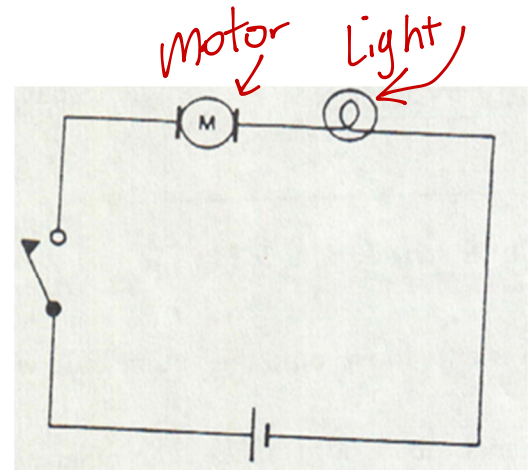
19. How many loads does the circuit have? 2

a. Name them: Motor & Light

20. Is the circuit complete or incomplete? incomplete

21. Are the loads working? No - switch is open

22. Is your home wired this way? No



23. What type of circuit is this? parallel

24. How many paths do the electrons have to follow? two

25. How many loads does the circuit have? 2

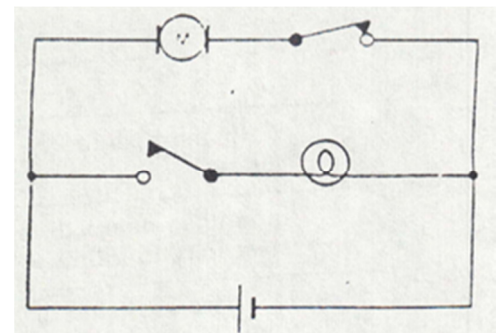
a. Name them: motor & light bulb

26. How many switches does the circuit have? two

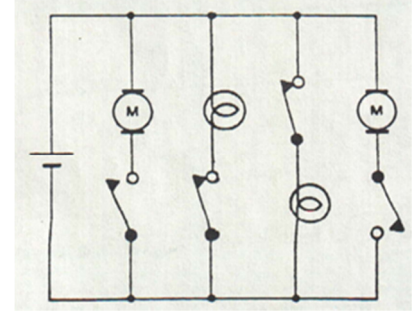
27. Which appliance is working? the motor

28. Which appliance is not working? the light bulb

29. Is your home wired this way? yes



30. What type of circuit is this? parallel
31. How many paths do the electrons have to follow? 4
32. How many loads does the circuit have? 4
- b. Name them: 2 motors & 2 bulbs
33. How many switches does the circuit have? four
34. Which load(s) is/are working? branches 2 & 3
35. Which load(s) is/are not working? branches 1 & 4
36. Is your school wired this way? yes






**Check the Circuit:**

Each phrase below describes either a series or parallel circuit. Which one is it? Put a check (✓) or (X) in the proper box. Each one only applies to one type of circuit.

Description:	Parallel Circuit	Series Circuit
37. Only one path for the electricity to follow.		X
38. More than one path for the electricity to follow.	X	
39. Loads either work or shut off one at a time.	X	
40. All loads are on or all loads are off at once.		X
41. Appliances share the voltage.		X
42. Appliances do not share the voltage.	X	
43. Not a good way to wire a home.		X
44. A good way to wire a home	X	
45. An extra bulb makes the others less bright.		X
46. An extra bulb does not change the brightness of the other bulbs.	X	








**Throw One Out:**

In each of the following sets of terms or pictures, one of the terms/items does not belong. Cross out the one that does not match.

- 47. Parallel circuit      ~~loads must work together~~      wiring in the school
- 48. Series circuit      loads must work together      ~~wiring in the school~~
- 49. Electrical symbol        
- 50. ~~Switch open~~      complete circuit      switch closed
- 51. ~~Generator~~      switch      battery

**Drawing Electrical Symbols:**

Draw the following electrical symbols.

52.	Open switch		56.	Wire	
53.	Closed switch		57.	Motor	
54.	One dry cell		58.	Light bulb	
55.	Two dry cells				

**True or False:**

Choose whether the sentence is true or false.

- 59. (T)  A dry cell gives static electricity.
- 60. (T)  Static electricity lights our homes.
- 61.  (F) Static electricity causes lightning.
- 62. (T)  A safe place to stay during a lightning storm is under a tree.
- 63.  (F) Electricity is useful.
- 64.  (F) Electricity can be dangerous.
- 65.  (F) This school is wired in parallel.
- 66. (T)  Your home is wired in series.
- 67.  (F) A parallel circuit lets you shut off one appliance at a time.
- 68. (T)  Appliances wired in parallel share the electrical pressure (aka voltage).