

# Light Bulb Activity

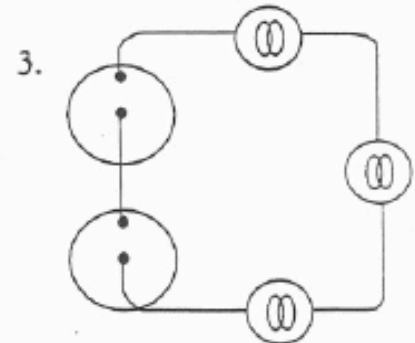
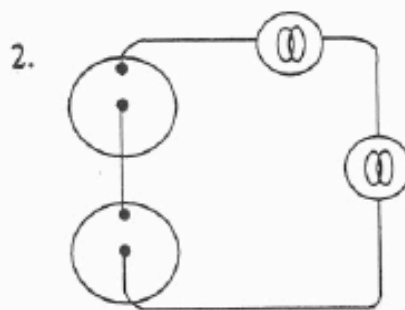
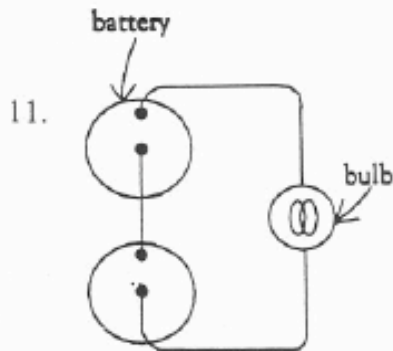
## Activity #1:

You will each be given a light bulb (small, low wattage), one piece of stripped copper wire and a 1.5 volt battery. Your task is to light the bulb. Do not allow your classmates to show you how to light the bulb. Classmates and your instructor may only guide you (via questions and small hints) toward discovering how to light the bulb yourself.

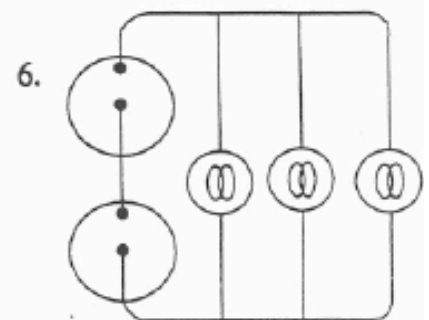
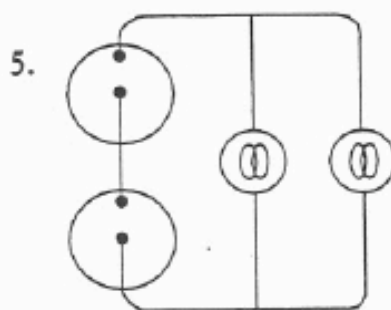
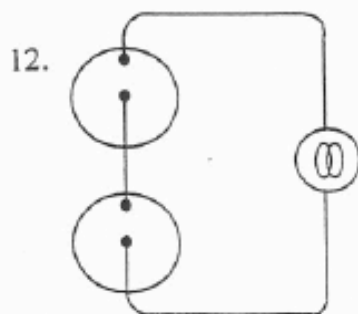
## Activity #2:

### PHYSICS LAB

R.N. Parsons



Hook up the circuits shown above. What happens to the brightness of the lamps as more are added in series? Why? Remove one lamp in circuit #3. What happens? Why?



What happens to the brightness of each lamp as more lamps are added in parallel? Why? Remove one lamp in circuit #6. What happens? Why? Is your home wire in series or parallel?

Now replace the two dry cell batteries with the small hand crank generator (be gentle with it!) Try all the above circuits and try it without a load. Why is it more difficult to crank when it's hooked to the lights? Which circuit uses the most energy to maintain the same brightness?