

Name: \_\_\_\_\_

Period: \_\_\_\_\_

**HW Unit 9:3 — Matching Circuit**  
**Mr. Murray, IPC**  
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**A-day: Due Thurs., 3/22 (Assig: 3/20)**  
**B-day: Due Fri., 3/23 (Assig: 3/21)**

1. About the matching circuit:
  - A) What did we use for wires?
  - B) What did we have to put over the wires?
  - C) Why?
  - D) What would happen if our wires didn't have insulation around them?
  - E) What two other parts did we have in the circuit?
2. Can electricity flow thru insulators?
3. Can electricity flow thru conductors?
4. When you put your hand near (but not touching) a wall electrical outlet, do you get electrocuted?
5. So, is air an insulator or conductor?
6. In our matching circuit, if there is a gap or a break somewhere in the circuit, will the light bulb light up?
7. If the light bulb lights up, does that mean that there is a complete circuit or an incomplete circuit?
8. If you put the wires on the back correctly, give one reason why the light bulb wouldn't light.

*Let's start learning a bit more about circuit by using what we know about water.*

9. Imagine pipes with water flowing thru them. What in our circuit allows electrons to flow thru the circuit?
10. To make water flow thru pipes, there must be a pump to push the water thru. What in our circuit pushed electrons thru the circuit (what starts the electrons moving)?
11. If our water pipes have a bigger pump the water pressure will increase. Will more or less water flow thru the pipes?
12. If you have less pressure the amount of water flowing will increase or decrease?
13. If you squeezed the pipe, making it skinnier, would more or less water go thru the pipes?
14. In your house, what kind of device turns water on and off?
15. In your house, what kind of device turns electricity on and off (what causes your lights to turn on)?
16. If a pump pushes harder, does the water in the pipes have more or less energy?

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