

# Electric Circuits

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

1. Log on and go to <http://www.article19.com/shockwave/oz.htm>
2. Be sure to read all of the instructions on the left side of the page.
3. Click on “the hand”.
4. Click on ‘**building a series circuit**’. Click OK.
5. In a series circuit, circuit elements are connected \_\_\_\_\_. This provides only \_\_\_\_\_ for the current to flow. Pull one of the lights out of the circuit. The other light goes \_\_\_\_\_ because the circuit is \_\_\_\_\_.

6. Click on “the hand”. Click on ‘**building a parallel circuit**’. Click OK.  
A parallel circuit provides \_\_\_\_\_ for the current to flow. Pull one of the lights out of the circuit. The other light \_\_\_\_\_. What advantages does a parallel circuit have? \_\_\_\_\_

7. Click on “the hand”. Click on ‘**current in a series circuit**’. Click OK.  
What is the current reading on the ammeter? \_\_\_\_\_.  
Move the ammeter to another spot in the circuit. What is the reading now? \_\_\_\_\_  
Move the ammeter to another spot in the circuit. What is the reading now? \_\_\_\_\_  
Make a general statement about the current in a series circuit.  
\_\_\_\_\_

Click on ‘clear’. Build your own series circuit and test to see if this is true. Show me! \_\_\_\_\_

8. Click on “the hand”. Click on ‘**current in a parallel circuit**’. Click OK.

Place the ammeter directly after the battery. The current is \_\_\_\_\_

Place the ammeter directly after the purple resistor. The current is \_\_\_\_\_

Place the ammeter directly after the light bulb. The current is \_\_\_\_\_

Place the ammeter directly after the green resistor. The current is \_\_\_\_\_

Add these three up.  
\_\_\_\_\_  
\_\_\_\_\_

Compare the current that you added up to the current at the battery. \_\_\_\_\_

Make a general statement about the current in a parallel circuit.

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Click on 'clear'. Build your own parallel circuit and test to see if this is true. Show me! \_\_\_\_\_

9. Click on "the hand". Click on '**voltage in a series circuit**'. Click OK.

Place the voltmeter across the source. The voltage is \_\_\_\_\_

Place the voltmeter across the green resistor. The voltage is \_\_\_\_\_

Place the voltmeter across the purple resistor. The voltage is \_\_\_\_\_

Place the voltmeter across the light bulb. The voltage is \_\_\_\_\_

Add these  
three up.

\_\_\_\_\_

Compare the voltage you added up with the voltage at the source. \_\_\_\_\_

Make a general statement about the voltage in a series circuit.

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Click on 'clear'. Build your own series circuit and test to see if this is true. Show me! \_\_\_\_\_

10. Click on "the hand". Click on '**voltage in a parallel circuit**'. Click OK.

Move the voltmeter so that it is across the source.

What is the reading on the voltmeter? \_\_\_\_\_.

Move the voltmeter across the green resistor. What is the reading now? \_\_\_\_\_

Move the voltmeter across the purple resistor. What is the reading now? \_\_\_\_\_

Move the voltmeter across the light bulb. What is the reading now? \_\_\_\_\_

Make a general statement about the voltage in a parallel circuit.

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Click on 'clear'. Build your own parallel circuit and test to see if this is true. Show me! \_\_\_\_\_