

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 _____
Compare the current that you added up to the current at the battery. _____

Add these three up.

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

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.

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.

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