Master Samurai Tech
LEADING APPLIANCE EXPERTS

Basic Electricity Module

Electrical Terms

Watch the video and read through the definitions in this unit. Then, write these definitions/answer these questions in your own words.

Closed circuit:

Open circuit:

Voltage:

Current:

What does “AC” mean and how is it typically used in appliances?

What does “DC” stand for and how is it typically used in appliances?

Resistance:

Power/Wattage:

Load:

Short:

Shunt:

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What is Electricity? Current and Voltage

This unit expanded on some of the concepts that were introduced in the previous unit. In your own words, describe the following:

Electrical circuit:

Electric current flow (from the video):

What is “actual” electron flow compared to “conventional”?

Voltage (summarize what you’ve learned about voltage in this unit):

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Resistance, Power, and Intro to Ohm's Law

Summarize what you've learned in this lesson about resistance and power:

Resistance:

Power:

Summarize some of the relationships between voltage, current and resistance in a circuit that are described by Ohm's Law equations:

What is meant by "infinite resistance"?

What is "work" referring to in appliances?

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Circuit Components and Series Circuits

What is the big deal about “closed circuits”?

What are the differences between “switches” and “loads”?

Draw the first circuit that we show in the first video, and label the components.

Now draw that same circuit in a line format.

Does the current change at different points in this series circuit?

What are the different notations used describing Power Supplies?

Recreate some of the calculations from the videos here or in your notebook:

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Parallel and Series-Parallel Circuits

Why does there have to be a complete circuit for current to flow?

Describe the important characteristics of parallel circuits:

For series-parallel circuits, what happens to the current flow if:

There is a break in the series portion of the circuit?

There is a break in one of the parallel circuits?

What are the differences between shorts and shunts?

What is the rule of thumb for the equivalent resistance of parallel loads? (in words, not the calculation)

Try recreating the calculation of equivalent resistance we show in the video. (Note: depending on how you round your decimal points, you may have a slightly different answer.)

What is the problem with the statement “Current follows the path of least resistance”?

Recreate some of the calculations from the videos here or in your notebook: