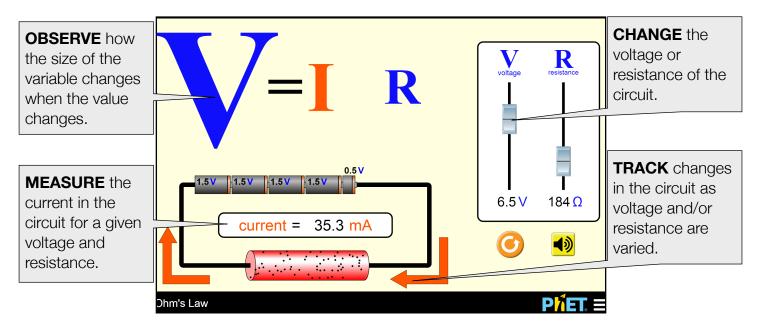
In **Ohm's Law**, students explore how changing the voltage or resistance influences current in a circuit.



Model Simplifications

- The black dots in the wire represent impurities in the metal lattice. Materials with a high density of impurities have a higher probability of collisions between the electrons and the cations in the lattice, which results in a higher resistivity.
- Because the length and area of the resistor is unchanged, the resistance slider controls the resistivity of the material.

Suggestions for Use

Sample Challenge Prompts

- Describe what happens to the current in a circuit when the voltage is increased. What happens when the resistance is decreased?
- Does changing the voltage of the circuit cause a change in the resistance of the circuit? Why or why not?
- Explain why current and resistance are inversely proportional.

See all published activities for Ohm's Law here.

For more tips on using PhET sims with your students, see Tips for Using PhET.