Grounding
Lesson Notes

Focus Questions:

- What is grounding and how does it occur?
- How is the grounding process explained?

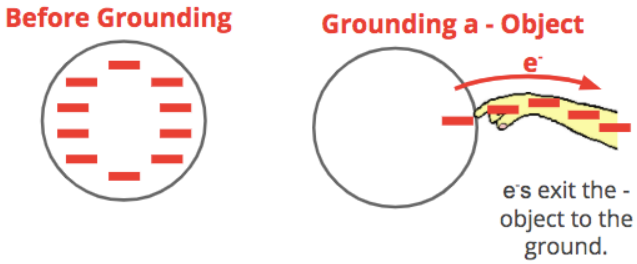
What is Grounding and What is a Ground?

Grounding: the process of discharging or neutralizing an object by the transfer of electrons between the charged object and a **ground** until the numbers of protons and electrons are equal.

Ground: an object that serves as a seemingly infinite reservoir of electrons that is able to provide or receive electrons when connected to a charged object.

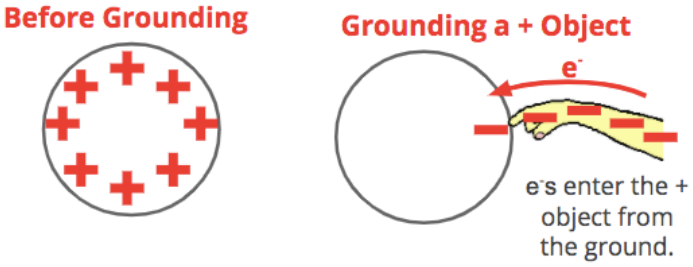
Grounding a Negative Object

A negatively-charged object has an imbalance of protons (p^+) and electrons (e^-), with more e^-s than p^+s. Discharging a negatively-charged objects requires the removal of excess e^-s. This is done by transferring the e^-s to the *ground*.



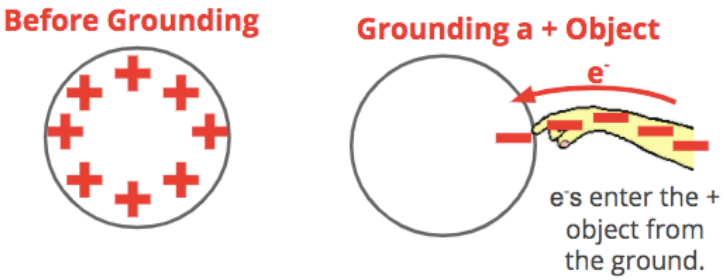
Grounding a Positive Object

A positively-charged object has an imbalance of protons (p^+) and electrons (e^-), with more p^+s than e^-s. Discharging a positively-charged objects requires the addition of e^-s to balance out is excess of p^+s. This is done by transferring the e^-s to the object from the *ground*.



Grounding Requires Conductors

Since grounding involves the movement of electrons between the charged object and the ground, it is important that the object and ground be connected by a conductor.



Grounding is Charge Sharing

Excess e⁻s find each other repulsive and make every effort to spatially distance themselves from one another. Grounding provides e⁻s extra space to occupy, thus minimizing repulsions.