

force.

In the Star Wars universe, a Jedi was adept at feeling the force flow through him or her. In our universe, a Jedi would be similar to an electrical conductor because conductors allow the force (electricity) to flow through them easily. An element with a low number of electrons in its valence ring (typically 1 to 3) makes a good conductor. That is why metals, such as copper (one electron in the valence ring) are generally used for connectors and wiring.

However, all the people within the Star Wars universe, weren't Jedi. There were some people who were impervious to the force and couldn't sense it at all. These people would be similar to insulators within our universe. An insulator has a higher number of electrons (typically 5-8) in its valence ring. An insulator is the opposite of a conductor and is used to block the flow of electricity.

The remaining people had the potential to become Jedi Knights if they received the proper training. Otherwise, their talent would go unused. These people could be compared to a semi-conductor in our universe. A semi-conductor typically contains four electrons in its valence ring and has the potential to become a conductor or an insulator depending on which elements are combined with it.

A path in an electrical system forms a closed loop and is called a circuit. And like the Star Wars universe, there are different types of paths to follow in our universe. In Star Wars, there were two types of paths of the force that one could follow. These two paths were known as the light side and dark side. The Jedi who followed the dark side were considered evil because the path was easier and the stu-

dents did not learn the proper discipline to harness their unbridled power. Likewise, the good Jedi followed the light side, but they were faced with a greater resistance because it took more determination and strength to do what was right as opposed to what was easier or wrong.

Well, there is no good or evil when it comes to electricity, but we can say that our force has a tendency to follow the dark side. The reason is that electricity is 'lazy' and always follows the path of least resistance. Thus, whenever a circuit is constructed, the electricity always tries to find the easiest path to ground (or its source). Therefore, it is important to place the loads (a type of resistance that consumes voltage and uses current) at the proper points in the circuit. The placement of these previously mentioned loads determines the type of circuit.

However, the variations in the electrical circuits are limited to three types: series, parallel, and series-parallel circuits. A series circuit provides a single path from the source to the load(s) and back again. A parallel circuit branches out from a single source to multiple loads and returns to its source through a common ground. A series-parallel circuit is a combination of the two previously described circuits.

Regardless of whether this overview of the 'force' served as training or a review for you, it won't turn any of us into a Jedi.

