WIIFM?

I teach in a variety of subjects within "Motive Power Fundamentals – Automotive Repair". By far the subject that is the most difficult for students to understand and get excited about is electricity. This is to a degree understandable.

Picture this; a 1967 Shelby GT 500 pulls in to a local hang-out. The straight-piped exhaust offers no protection or consideration for the hearing of those near by. The power contained under the hood is palpable, felt in the lungs and teeth of those who are unconsciously drawn toward it, as if following some strange siren song. The driver shuts the engine down, it shudders before becoming still and silent. Like some mythical beast laying down to slumber.

The driver exits the car, only to be stopped near the end of the hood by a group of starry-eyed teenage boys. The boldest of the group speaks up awkwardly. "Dude" he begins, "pop the hood, I want to see what kind of battery you're running!"

This of course, never happens. Students (for the most part) are much more interested in engines, turbos, and superchargers. So why should they care about electricity? Here are my reasons:

- Engines are great, but there are very few vehicles on the road that do not have electronically controlled fuel injection, ignition systems, and just about everything else between the bumpers.
- If you want to make serious power, tuning is a must. It's not enough to just change hard parts. The engine management software needs to be tweaked to make the most of the hardware. If you don't understand the electronics, this will not be possible.
- Hybrid and full electric vehicles are the future. EVs don't have engines, or even traditional transmissions in most cases.
- On the topic of hybrid/EVs, its not only the way the vehicles work, but how to perform that work safely that is a concern. These vehicles commonly have a high-voltage system that operates in excess of 300 Volts DC! Understanding the required precautions is a must.
- Customers like accessories. Try installing an aftermarket sound system, fog lamps, or trailer wiring without a basic understanding of electricity. You may not like the results!
- Diagnostics are where the money is! Most shops will have a higher labour rate for electrical diagnostic work. This is commonly a 20% increase over the standard door rate.

Typically, these reasons are enough to get my point across. It may not be enough to get the room excited, but at least they understand the value in the subject matter.

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