Why is this project important?
- The average internal combustion automobile engine emits 0.9lb of CO₂ per mile
- 30% of all the energy consumed in the US is used for transportation
- 95% of all energy used for transportation in the US comes from petroleum
- Emerging economies are rapidly approaching the US automotive energy use

This project will explore alternative automotive electrical power systems.

What will I do in this project?
LEARN about alternatives to the internal combustion engine based on electric power sources such as batteries, fuel cells, and solar cells that can be used to power electric motors for automotive application.
ANALYZE the operation, energy density, efficiency, and available power of these alternative sources through the use of experiment and calculation.
DESIGN and BUILD an electric power system for a model electric car using a combination of any or all of the alternative power systems in this project.

What fields of engineering is this project related to?
Chemical Engineering – introduces the concepts of electro-chemical cells, thermodynamic efficiency, material properties, and conservation laws.
Electrical Engineering – introduces the concepts of electric circuit design and construction, electrical energy generation, storage and transfer, and electric motors.
Mechanical Engineering – introduces the concepts of power and torque, locomotion, power conversion, and gearing design.

Who can I contact for more information?
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