

Exploring Energy Conversions with Alternative Vehicles

Name _____

Phenomenon: Watch the phenomenon of the solar car running. Ask three questions about what you see.

- 1.
- 2.
- 3.

Day 1

Take a tour of Utah's alternative fueling stations on the following website

<https://afdc.energy.gov/stations#/find/nearest?fuel=all>

Then answer the following questions from the website.

Where is the closest fueling station to your home? _____

How many fuel or charging stations are there in Utah in the following categories?

Biodiesel _____

Hydrogen _____

Compressed Natural Gas _____

Liquefied Natural Gas _____

Electric _____

Ethanol _____

Here are some more optional websites to discover more about alternative fuels and fuel efficiency in Utah and beyond.

Utah Governor's Office of Energy Development <http://energy.utah.gov/resource-areas/>

Utah Transit Authority, Trip Planner <http://www.rideuta.com/mc/?page>

Utah Department of Transportation, TRAVELWiseTM <http://www.travelwise.utah.gov/>

U.S. Department of Energy, Alternative Fuels Data Center <http://www.afdc.energy.gov/>

U.S. Department of Energy, Fuel and Emissions Calculators <http://www.fueleconomy.gov/>

Cost analysis

Pick three types of cars to research from this list: Gas, diesel, electric, hybrid, natural gas, propane and Hydrogen

Criteria

Energy source for car	Cost of car	Cost of repairs	Cost of fuel	seating space, durability, acceleration	Fuel availability

Day 2 Research the potential environmental effects of each of the cars you picked. Remember to look at the raw materials it would take to produce that car.

Criteria	Environmental impact

Summary:

Make a **claim** concerning the automobile you think is most practical under current conditions.

What **evidence** for this research supports your claim?

What **reasoning** did you use?