
FABLAB
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EXIT
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HOME
PERIOD
BAYSIDE
ACADEMY
Have Your DNA and Eat It Too!
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Cardboard Model of Future Bayside Academy
Middle School
Bayside Academy
Structural Evolution
Current Campus Layout
Today, the campus includes:
Classroom buildings for K–8 education
A modern gymnasium and locker rooms
Multipurpose assembly and performing-arts spaces
Outdoor play and physical-education areas
Access to nearby Joinville Park for recreation and community events.
The campus sits in a residential neighborhood near Seal Slough and Foster City.
Summary Timeline
Period
Structural Development
1950s–1960s
Original school buildings constructed for neighborhood students
1980
Site officially opened/organized as a district middle school
2010s
STEM academy conversion and classroom renovations
2016
Modernization project (classroom renovations + portables)
~2020
New gymnasium and major facility upgrades
2015 Modernization
The district approved a modernization project that added 12 classrooms, a dedicated STEM classroom, and a new gymnasium.
The project also included upgrades to the heating and ventilation systems.
Major Campus Facilities Upgrades (Around 2020)
The upgrades included improvements to:
Classroom buildings
Site circulation and parking
Drop-off and pick-up areas
Outdoor learning spaces
Campus utilities
The goal was to address aging infrastructure and improve safety and accessibility.
SWITCHING GEARS
From Gasoline to Green Energy
Pros of non-electric Cars
This is mainly focusing on gasoline cars.
Gas cars have fast and quick refueling, allowing for faster stops. This is also convenient if you need to go somewhere fast.
They also generally have a higher top speed than EVs, and they can travel distances faster than EVs.
Gas cars also have a higher range than many EVs (they can travel farther on a full tank vs EVs).
There are many gas tank companies and you can find them everywhere, compared to electric charging stations that are less abundant. This allows for easy refueling because it isn't hard to find a gas station.
Cons of non-electric Cars
This is mainly focusing on gasoline cars.
Gas cars are not eco-friendly because they emit tailpipe gases like carbon monoxide, CO2, Methane, Nitrous Oxide, and Nitrogen Oxides, which are greenhouse gases, leading to global warming.
Gas cars require more maintenance compared to electric cars (Oil changes, coolant fluids), and this are more expensive in the long run.
Gas is also more expensive than what the cost is for EVs (see Pros of EVs), but this also depends on where you live. In California, gas is almost 5 times as expensive as electricity.
One other con of gas cars is that you can't refuel at your home, while you can install an EV charging plug.
~30% of the gas used in the world is by Americans
Electric vehicles, or EVs, refer to vehicles that run on electricity. There types of cars have been around and were very popular in the 1800s and 1900, but once gas-powered cars were invented, they slowed the progress of EVs, but today, it's still common to see them.
There used to be only a few car companies that made EVs, but as they gained popularity, more of them tried it. Now, many companies sell EV models, and the percent of cars in the U.S. that are EVs is rising. Soon, maybe gasoline will be a thing of the past
A gallon of gas weighs 6 POUNDS, but when it's burned in cars, it releases 20 POUNDS of CO2!
Our Model
Wooden Axles
Battery Pack
TT Dual Motor
Wires
The model above is a simple representation of an electric vehicle. The main components are the battery pack and a dual motor for the rear wheels. It's main purpose is to represent how a real EV works. The motor is connected to the battery using wires that run over and under the car. The plastic wheels are wooden "axles" and the back axles are separately connected to the motor. To think about it another way, the model is just a simplified electric car.
A barrel (~owed 42 gallons) of crude oil can produce only 19 gallons of gasoline
The process also involves temperatures up to 11,000°F (see fact above)
Pros of EVs
EVs don't release harmful gases into the air, making them eco - friendly, which is also safe for the driver.
They require less maintenance because the motors are less complicated than a non-electric car.
EVs also offer a quiet ride and they have regenerative braking, contributing to their fuel efficiency.
EVs are more energy efficient than gas vehicles (3.6 times as much), reducing fuel costs. The general cost of the electricity is around the same as paying $1 per gallon.
Fast charging stations utilized near shops and other businesses can incline people to visit those places, increasing general revenue. They are also placed near offices, so you can charge while you're at work.
Cons of EVs
The main cons of EVs are from their batteries.
The lithium-ion battery(s) inside EVs are dangerous if exposed to fire, and can go into a "thermal runaway" where it is a reaction that rapidly increases the heat and can result in a fire or explosion.
EV batteries are also expensive to produce. They usually contain lithium, copper, nickel, and cobalt, and extensive mining of these materials can harm the environment. Up to 500,000 gallons of water are needed for one ton of refined lithium.
Cobalt is a hazardous metal, and mining it without proper precaution can lead to health problems. Mining of all these metals can also lead to soil contamination if not done properly.
4.3 TONS of CO2 are produced from an average car in one year
The First electric vehicle was invented BEFORE The first gasoline-powered Car!
The History of the Electric Vehicle
only 12-30% of a gas car's Power goes to moving the wheels
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Science, Technology, Biology, Robotics, Art, Music:
A Fun, Educating Community Event! Explore. Create. Discover.
Ciencia, Tecnología, Biología, Robótica, Arte, Música:
¡Un Evento Comunitario Divertido y Educativo! Explora. Crea. Descubre.
idea
Study
Innovation
Solution


ARACHNIDA
SPIDERS, SCORPIONS, WHIPSCORPIONS, TICKS, AND MITES
102,000 DESCRIBED SPECIES
600,000 ESTIMATED TOTAL SPECIES
ISOPODA
ROLY-POLIES AND WOODLICE
5,000 TERRESTRIAL SPECIES
MYRIAPODA
MILLIPEDES AND CENTIPEDES
16,000 DESCRIBED SPECIES
INSECTA
BEETLES, WASPS, MOTHS, FLIES, AND MANY MORE
1,000,000 DESCRIBED SPECIES
5-10,000,000 ESTIMATED TOTAL SPECIES
HELLO
BUG POWER


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The MUPPETS