

Name \_\_\_\_\_

## Decoding Electric Vehicles: Battery Electric vs. Plug-In Hybrid

### Short Answer Key

1. The primary difference between a Battery Electric Vehicle (BEV) and a Plug-In Hybrid Electric Vehicle (PHEV) is that BEVs run exclusively on electricity, while PHEVs have both an electric motor and an internal combustion engine. BEVs produce zero tailpipe emissions, while PHEVs can switch between electricity and gasoline power.
2. BEVs and PHEVs charge their batteries using electric charging stations. Both can be charged at home using a regular electrical outlet or at public charging stations. PHEVs can also recharge their batteries while driving using the gasoline engine as a generator, especially during regenerative braking.
3. PHEVs have the advantage of a longer driving range compared to BEVs because they can switch to gasoline power when the battery is depleted. This flexibility allows PHEVs to handle both short trips on electricity alone and longer journeys using gasoline.
4. A significant environmental benefit of BEVs is that they produce zero tailpipe emissions, meaning they do not release pollutants or greenhouse gases during operation. This reduces air pollution and helps combat climate change.
5. The choice between a BEV and a PHEV can be influenced by an individual's driving habits and environmental concerns. BEVs are suitable for those who mainly drive shorter distances and prioritize zero emissions. PHEVs are ideal for those who need the flexibility to drive longer distances occasionally and want to reduce emissions compared to traditional gasoline cars.

