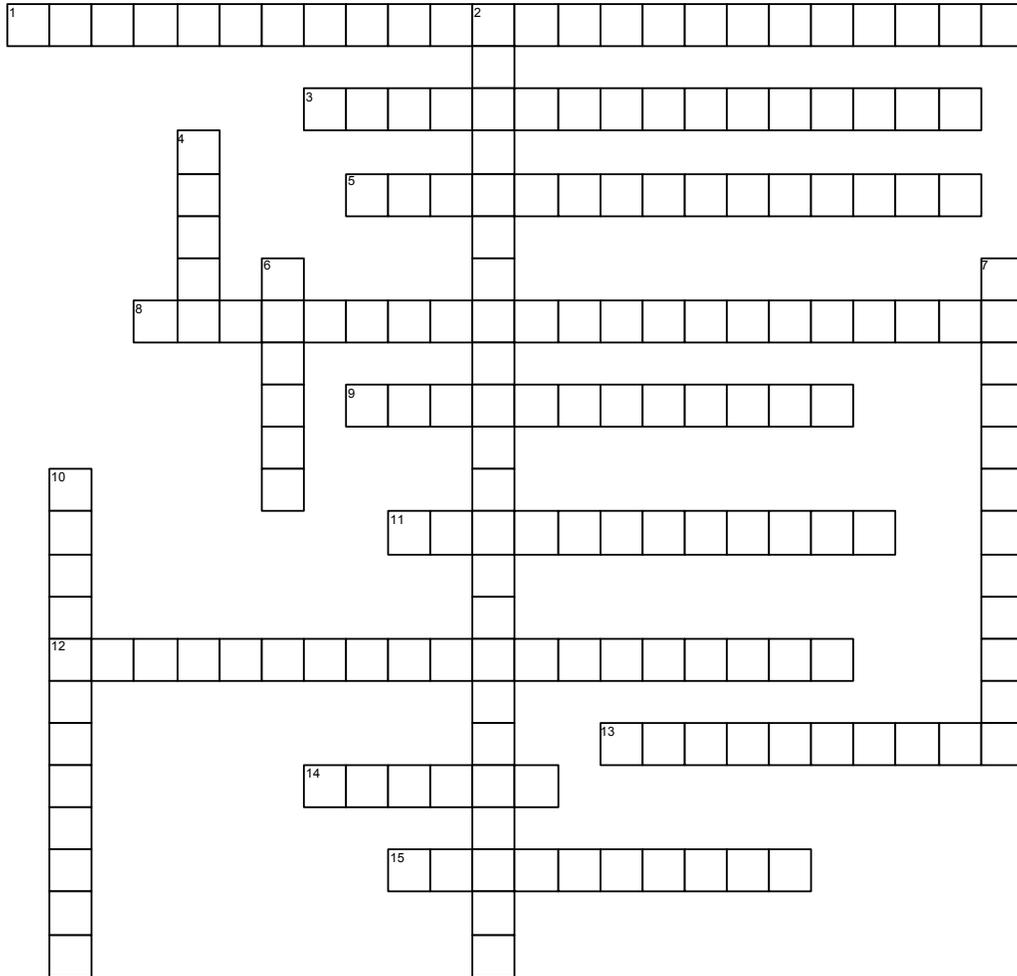


Hybrid Electric Vehicles

Chapter 33



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ACROSS

- 1 The _____ used in a hybrid vehicle can be either gasoline or diesel, although only gasoline-powered engines are currently used in hybrid vehicles.
- 3 Early _____ used lead-acid batteries, an electric motor, and a mechanical controller.
- 5 The _____ enables the vehicle to use a smaller, more fuel-efficient engine without giving up vehicle performance.
- 8 A _____ uses both an internal combustion engine and an electric motor to propel the vehicle.
- 9 The _____ turns off the

- engine when the vehicle is stopped.
- 11 Another name for a full hybrid is a _____.
- 12 When decelerating, the braking system captures the energy from the vehicle's inertia and converts it to electrical energy, which is stored in the battery or other device for later use, this is called _____.
- 13 A _____ will incorporate idle stop and regenerative braking but is not capable of using the electric motor to propel the vehicle on its own without help from the internal combustion engine.
- 14 Different vehicle manufacturers use various _____ technologies.
- 15 A _____ uses idle stop regenerative braking, and is able to

propel the vehicle using the electric motor alone.

DOWN

- 2 Early electric vehicles were also called _____.
- 4 The vehicle is shut off when the _____ indicator is off.
- 6 The presence of _____ cables under the hood would identify the vehicle as an HEV.
- 7 A _____ uses 144- to 158-volt batteries that provide for engine stop/start, regenerative braking, and power assist.
- 10 When the electric motor propels the vehicle at lower speeds, this mode is often called _____.