What Electric Vehicle Should You Buy?

Re-Energy
Learning Activity
Grade Level 7-12

Main Objective

Learners will work in groups to determine what electric vehicle is best suited for each type of person in the given scenarios.

Learning Outcomes

By the end of this activity, learners will:
- Understand the numerous aspects that should be considered when purchasing an electric vehicle.

Curriculum Connections

Alberta
Science 10: Stewardship
Social Studies 10-1: To what extend should we embrace globalization?
Social Studies 10-2: Living in a Globalizing World

Length of Activity: 1-2 hours

Step 1+2: Go into groups and pick a EV scenario.
Step 3: Research the best EV for the chosen scenario.
**Step 4:** Presentations

Materials Required

- Internet-enabled device
- How to Buy an Electric Vehicle Backgrounder
- Types of Electric Vehicles Backgrounder
- How to Buy an Electric Vehicle Worksheet
- Electric Vehicle Catalogue

Introduction

Electric Vehicles (EV's) are the future, and the future is now. As we've seen, there has been a large increase of EV's in the market. You can purchase a hybrid, plug-in hybrid electric vehicle, battery electric vehicle, EV with range extender, etc. But whether you want a full or partial electric vehicle, there is one available for you.

There is no universal vehicle that will suit each individual person's needs. In the How to Buy an Electric Vehicle backgrounder, we learned the many considerations involved in buying a vehicle, specifically electric.
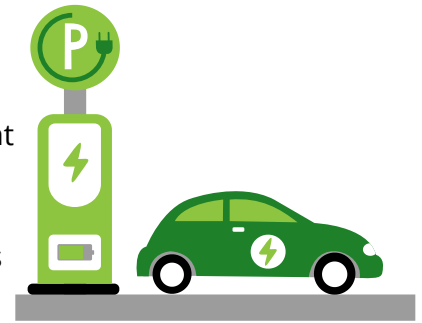
Activity

Before you begin:

As a class or individually, review the How to Buy an Electric Vehicle backgrounder

Step 1: Divide Learners into Groups

- Begin by getting learners into groups. Learners will work in their groups to determine what EV (or PHEV or Plugin Hybrid) Electric Vehicle is best suited for each type of person in the scenarios listed in step 2.
  - They will need to consider the demographic type, day-to-day life, and personal requirements such as cargo space to name a few. A person who uses a vehicle to commute to and from work will likely need a smaller vehicle than someone who travels a lot, or someone with a family.
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Step 2: Pick a Scenario

- Learners will either:
  - Complete the activity as if their own family was considering buying an EV **or**
  - Choose one or more of the pre-determined scenarios found below

Note: Mixing and matching the people and place options adds complexity for advanced students. For younger grades, it is recommended to choose one scenario for all groups to work with.

Scenarios:
1. Single mom with two kids: 20,000 km per year (110 km max per day)
2. Retired couple who loves to travel with a trailer: 50,000+ km per year (800 km max per day)
3. University student: 10,000 km per year (20 km max per day)
4. Four-person family (2 adults, 2 kids with extracurricular activities): 35,000 km per year (110 km max per day)

Step 3: Research the best EV for Chosen Scenario

As a group, learners will research the EV they will purchase in the assigned scenario. Learners will play out their scenario to determine which EV is best suited for the lifestyle listed above.

- Use the attached worksheet to help learners dive into their decision in detail.
- In conjunction with their own research, learners can also refer to the EV catalogue.

Step 4: Create Presentation

Learners can create a presentation, a poster, or any other form to showcase why they chose their EV (plug-in hybrid or battery) and present their choice to their peers.

- The presentation should include reasoning why the EV was chosen, the operating costs, the GHG emissions, etc.