

History of the Electric Vehicle

Re-Energy
Learning Activity
Grade Level 7-12



Main Objectives

Learners will understand the processes behind the changes in popularity of the Electric Vehicle and gain an understanding of the technological changes in Electric Vehicles.

Learning Outcomes

By the end of this activity, learners will:

- Learn about the history of the make and models of various electric vehicles and investigate current trends
- Conduct research to understand the process behind changes in popularity of the Electric Vehicle and gain understanding of their technological changes
- Present their research findings to their class

Curriculum Connections

Alberta

Science 7: Interactions and Ecosystems
 Science 8: Mechanical Systems
 Science 9: Electrical Principles and Technologies
 Science 10: Energy Flow in Technological Systems;
 Energy Flow in Global Systems; Stewardship
 Science 11: Science, Technology and Society
 Science 12: Energy and the Environment
 Social Studies 9: Issues for Canadians: Economic System in Canada and the United States
 Social Studies 10: To what extent should we embrace globalization?
 Social Studies 20: To what extent should we embrace nationalism?

Length of Activity

1 - 2 hours

Materials List

Internet-enabled device
 History of the Electric Vehicle Backgrounder
 History of the Electric Vehicle Worksheet
 Marking Rubric

Procedure

Step 1: As a class or individually, review the History of the Electric Vehicle Backgrounder and complete the questions in the associated worksheet.

Step 2: Choose one of the following two research inquiry questions to conduct research on.

Note: One question focuses on the social and political changes that have led to the increased popularity of the EV, the other looks at cost savings and financial choice.

Research Question 1:

It is clear the economic events and American legislation have had an impact on the rise, and demise of the EV. More recently, global climate crisis and natural resource protection has begun to move the EV back into the mainstream. When examining the graphic on slide 8 of the backgrounder, the total number of EV's on the market doubled in one year.

Using your research skills, hypothesize a reason (aside from lower cost) as to why you believe this might have occurred? What events have since played an equally important role in the popularity of the EV?

Research Question 2:

As mentioned in the previous question, cost does play a part in popularity of a vehicle. Using the data from the backgrounder and your research skills, what would the overall most cost-effective new vehicle be for you? Would you choose an EV? Would a hybrid be more cost effective, or an ICE vehicle? In your decision-making process take into account:

- I. Incentives: Provincial or Federal
- II. Cost to install the technology in your home
- III. Cost of vehicle
- IV. Energy cost vs gasoline
- V. Insurance
- VI. Personal Needs-family size, long trips, etc.

If you decide that an EV is not the most cost-effective choice, but rather have chosen a hybrid or another vehicle, rationalize your decision.

Step 3: Present your research findings to the class.

Extension Activity

Get a first-hand look at the Tesla 3 and learn about its top features by watching the [Tesla 3 Video Tour](#)