

ACTIVITY 4: Charging an EV, HEV, or PHEV

Activity Objective: Write an essay explaining the difference between charging an EV and PHEV batteries, and the difference between a 120 and 240 volt recharge.

Definition: After the PHEV battery pack has been discharged propelling the vehicle, the ICE is used to keep the battery charged enough to propel the vehicle, but it does not fully recharge the battery pack. To fully charge the high-voltage battery pack in a plug-in hybrid electric vehicle requires that it be plugged into either a 120-volt or a 240-volt outlet.

REVIEW VIDEOS:

How high voltage batteries are recharged for PHEV and EV.

Prius battery balancing and charging <https://www.youtube.com/watch?v=BNzGoH2wVUE>

Battery capacity and range correlation of an EV: Calculating battery size Rating:

<https://www.youtube.com/watch?v=uLrCFStQQUU>

<https://youtu.be/Turt1YaZncI>

Charging you EV at Home: 6:03

Materials: Chapter 7, paper, computer, printer, Internet Access

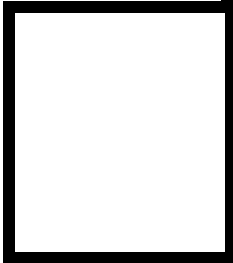
Procedure:

1. Work as partners or small teams.
2. Review the above videos.
3. Write an essay explaining how EVs and PHEVs are charge, and explain why HEV batteries are NOT charged.



RUBRIC

4 World-Class Learner	3 Proficient Learner	2 Developing Learner	1 Emergent Learner
Learner at this level has gone beyond mastery of knowledge, skills, & attitudes described in project. World-class learner consistently exhibits high-quality performance.	Learner at this level has had opportunities to apply knowledge, skills, & attitudes of component of project. Proficient learner has mastered essential attributes, thus proving mastery.	Learner at this level has been exposed to & had opportunity to apply knowledge, skills, & attitudes of project. Developing learner may have only a few essential attributes to master before mastery.	Learner at this level may or may not have been exposed to knowledge, skills, & attitudes required by academic standards of the project.



- 1 = Emergent Learner**
- 2 = Developing Learner**
- 3 = Proficient Learner**
- 4 = World-Class Learner**