

Name:

Date:

Class:

Environmental Impact StoryMap #4: EV Batteries

Instructions: Complete the following questions as you explore the [Environmental Impact StoryMap #4 EV Batteries](#)

StoryMap #4 Link: <https://storymaps.arcgis.com/stories/90f20cc459ab459a8db07932b3f9a3ee>

Think About It: Watch the [video](#) and think about what you observe:

1. What are the benefits and challenges of EV batteries?
2. What environmental impact issues are related to EV batteries?
3. What solutions exist for making EV batteries more environment-friendly?

Check for Understanding #1:

4. What is the most common type of battery used to power electric vehicles?
5. Which metal is used in the cathode of this type of EV battery that enables it to be rechargeable?

Check for Understanding #2:

6. Which product uses the most lithium, and which countries produce the most lithium?
7. Describe the impacts of mining lithium for batteries.

Check for Understanding #3:

8. Compare and contrast the benefits of lithium-ion and alternative batteries for EVs.
9. What ideas do you have for reducing, reusing, and recycling the impacts of lithium-ion EV batteries?

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Reflections on Lithium Mining in the U.S.

10. Explain the reasons for lithium mining in our country.
11. Explain the challenges of lithium mining in our country.
12. Describe what is valued by communities opposing lithium mining in their areas.
13. Describe what is valued by local governments and lithium companies supporting lithium mining.
14. What ideas do you have to bridge these differences regarding lithium mining in the U.S.?

Talk About It & Engineering Connections:

15. How do lithium-ion EV batteries help us create the shift to sustainable transportation? How does this affect environmental impact-related issues?
16. Describe the challenges of lithium-ion EV batteries from sourcing battery components to battery end-of-life concerns. How does this affect environmental impact-related issues?
17. What ideas do you have for the next generation of EV power sources that have greater sustainability and less environmental impact than current lithium-ion EV batteries? What role can environmental impact play in new EV battery technology development and use?