Lesson 5-4: Environmental Impact in Electrochemistry	
Curriculum Expectations	• F1.1 • F1.2 • F3.5 • F3.6
Learning Goals	• Explore commercial uses of electrochemistry. • Investigate techniques and technologies that can be used to help reduce the negative environmental effects of electrochemical products. • Understand different ways that chemistry can help and harm humanity and the environment.
Success Criteria	I know I have achieved the goals for this lesson when I can: • Describe commercial uses of technology that use electrochemical principles. • Identify some of the the dangers to the environment and our bodies of products that use electrochemistry. • Explain ways that we can reduce the negative environmental effects of toxic pollution caused by electrochemical products.
Teacher Prep	• Ensure videos play properly

Minds On

1. **<u>Battery Recycling</u>**

   Lead a class discussion based on the following prompts:

   a) ***"What do you do with your batteries when they run out of power?"***
   b) ***"What is the proper way to dispose of batteries?"***
   c) ***"What are some possible negative environmental consequences to improper disposal of batteries?"***

Action

****Refer to the Differentiation Resources link for additional practice worksheets, and to enrich your classroom teaching using different tools throughout the lesson. ****

1. **5-4A: Environmental Impact of Electrochemistry**

   - This is meant to introduce some of the alternative technologies being developed.
   - Watch the movies together as a class and have a class discussion following each, having students offer their thoughts on the value, practicality and potential pros and cons of each technology.
   - After each video, select students to summarize each video for the whole class. You can break the videos up into sections and have different students summarize different sections.
   - Try to focus students towards the environmental consequences of our current technologies and these future technologies.

Consolidation

1. **5-4: Environmental Issues in Electrochemistry**
   - To be completed individually.
   - Review the assignment beforehand, emphasizing where marks are allocated and proper submission formats.

- Emphasize that creativity, original thinking and proper research techniques are crucial for this assignment.
- Review the rubric together before students start the assignment so that there is clarity on how they will be assessed.

****Refer to Differentiation Resources for additional practice worksheets, and to enrich your classroom teaching using different tools. ****