

Sustainability Teachers' Academy Lesson Plan

Life Cycle Analysis of Electronic Devices

Topics Covered

Sustainability
Three Pillars
Life Cycle Analysis

Grades

6-8

Duration

15 Minutes

Sustainability Competencies

Systems Thinking

Online Resources

[The Story of Electronics](#)

Objectives

Students will explore the life cycle of electronic devices (computers, cell phones, etc.).

Materials

- Wi-Fi access, computer and projector
- Student materials for taking notes, diagramming, or recording thoughts

Background Information

The goal of a life cycle analysis (LCA) is to understand each stage of the production, use and disposal of a product. When a scientist performs an LCA, he or she carefully measures all of the resources (inputs) and waste products (outputs) at every stage.

For example, during the production of a cell phone, an LCA would account for the all raw materials used (glass, fossil fuels, metals) to make the cell phone, as well as the wastes produced (carbon emissions, plastic scraps, etc.) by the factory.

Recommended Procedures

Project the short video “The Story of Electronics”. In their notes, students will draw or sketch the life cycle of a typical electronic appliance (such as a cell phone, TV or computer) using information from the video. Ask students to share their and discuss parts of the life cycle of that could be made more sustainable.