

Suggested Curriculum #2

- The first segment of this set of curriculum is a **lesson** titled "[I've Got Issues!](#)". The premise behind this lesson is to ask students to identify a lesson, consider different perspectives facing the issue--including their own perspective, and postulate a solution. It is estimated that the lesson will take **50 minutes**. The lesson plan includes a background information summary for the teacher. The learning objectives are listed below.
 - Define and identify an environmental issue.
 - Understand that all issues involve multiple perspectives.
 - Explain how collaboration can be used in solving engineering perspectives.
 - Recognize literature as a record of human experience.
- The second segment of this set of curriculum is a **lesson** titled "[Solid Waste Takes Over](#)". Building upon the previous lesson, this lesson considers the problem of solid waste management and how it affects the environment. In the lesson plan are links to PDF files that can enrich the students' learning and understanding, if the teacher so chooses to utilize them. The lesson is approximately **50 minutes** long. The learning objectives are listed below.
 - Understand and explain different methods of waste disposal.
 - Explain some of the major problems caused by waste disposal and use of landfills.
 - Understand and explain the role of engineers in solid waste management.
 - Suggest ways to reduce the amount of solid waste going to a landfill.
- The third segment of this curriculum is an **activity** titled "[Trash Talkin](#)". It is estimated that the total time for this activity should be approximately **60 minutes** (10-15 minutes for initial set-up, 35-45 minutes for activity at the end of the collection time). There is also an estimated cost on \$5.00 although teachers should check the materials list to see if any item is already on hand or something a student could bring in. The learning objectives for this activity are as follows.

- Make predictions on the types of trash that a class generates during a week.
 - Sort trash into categories (food, paper, plastic, metal, glass, and misc.) and subcategories (re-useable, recyclable and non-recyclable).
 - Calculate the total mass of a group of items.
 - Explain the cause-effect relationship on the environment of accumulating solid waste.
 - Describe the attitudes of solid waste in developed and undeveloped countries.
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- The last **activity** is titled [“Write On! Making Books or Newspapers to Share -- Like Engineers”](#). This activity is estimated to have minimal cost and take approximately **100 minutes** (two 50-minute class periods). This activity gives students the chance to communicate the lessons they’ve learned about solid waste, environmentalism, and composting into a book or newspaper. After this activity, students should be able to create a product to communicate their understanding of the multitude of engineering and environmental topics presented in this curriculum.