Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_/20

Problem Solving Assignment: Plastic Pollution

Upload the assignment to Canvas December 6 before 5:00 pm

Learning Objectives:

* Determine personal rate of one-time use plastic products per year
* Using the personal rate of one-time use plastic calculate time needed for the United States to make the Pacific Garbage Patch
* Identify ways to decrease ‘plastic footprint’
* Propose a potential solution for how society can use less plastic

Plastic pollution is an environmental concern, one that contributes plastic in all sizes, from microplastics to macro-plastic to the Garbage Patches in the oceans. Each year tons of plastic are improperly discarded, intentionally or not. The addition of plastic to the environment is an issue, but its exact effect on animals, plants, and even on people is not known. Recent studies have even found microplastics in drinking water, fish and beer (Joyce, 2018). Each of us contributes plastic to the environment, but how much?

For this last problem-solving assignment, you will be **tracking the amount of plastic** you use during a week. These data will then be used to extrapolate how much plastic the class, BVU, the city of Storm Lake, and then the United States use. You also need to keep a “photo diary” of your plastic usage, which will be included in the assignment. Lastly you need to identify the problem (which is not simply “plastic”), come up with a solution to the problem and then assess the chance of success for the solution. Remember, that assessing the problem includes thinking about how much money it would take or how happy people would be with your solution.

If you work in groups, you still **must** submit your own and independent work for all portions of the assignment. The assignment is due December 6 at 5:00 pm. Please submit the assignment to Canvas. Your graphs must be ‘printed’ as a PDF, or easily visible on one page. The preferred delivery of the graphs is they are inserted into a Word document. All axes and features of your graph must be clearly readable and professional looking. Your identification of the problem, interpretation of the problem, and solution should be at least 1.5 full pages double spaced. You can also include your reaction to the data.

You **must** find one additional source, either a formal journal article or a state or government agency. Information on microplastic pollution and plastic pollution can be found from NOAA, the EPA, and many other websites. Wikipedia will also provide helpful information, but this information will be more general. For each source you use, remember to cite the information using an appropriate format (i.e. APA, MLA, or similar).

Reference

Joyce, C., Beer, drinking water and fish: tiny plastic is everywhere, the Salt: what’s on your plate, <https://www.npr.org/sections/thesalt/2018/08/20/636845604/beer-drinking-water-and-fish-tiny-plastic-is-everywhere>