Name/Team: _____ Date: _____ Class: _____

Microplastic Masses Worksheet

Engineering Design Challenge: To work as environmental engineers to develop a method to remove as many plastic microbeads as possible from a 1 tablespoon sample of a commercial cleanser product. After extraction and drying, the beads will be weighed.

1. **Record the known masses of the tablespoon and cleanser to determine the initial cleanser mass.**

   Mass of empty tablespoon (mass provided by teacher) = _____

   Mass of tablespoon + cleanser sample = _____

   Mass of cleanser sample = _____

2. **Our team's best filtering idea/plan using the provided materials.** Make a sketch or diagram with materials indicated.

3. **Construct your filter. Extract and save micro beads to dry on filter papers labeled with team name.**

4. **After beads and filter have dried, record the mass of the collected beads.**

   Mass of extracted microplastic beads = _____

5. **Notes about possible improvement and redesign ideas.** Feel free to make notations/changes on the original design plan above.

6. **Reflection questions.** (Write answers on other side of this sheet.)
   A. How did your team do?
   B. Why did you take the steps you did with your team?
   C. What proportion of your initial cleanser sample was extracted as beads?
   D. Provide details about why your method was or was not effective.
   E. What steps would you take next time to improve the method/procedure?
   F. How effective were you as a productive group member?