Recycle Sort Engineering Challenge

Day 1	Day 2	Day 3	Day 4	Day 5
Recycle Sort Brainstorm. Intro- #3 below.	#3-#5 trial 1/ Presentations begin	Finish presentations/ Self assess #1 Rebuild (#6)	Complete final build/paperwork (FLOW CHART/ ACCOUNTING SHEET) Presentations	Complete presentations/ Self assess #2 Presentation Feedback

Assessment

You will be assessed individually (with 2 self assessments around teamwork and a presentation feedback form) and as a group by earning team points (related to performance goals= on budget, on time, success in sorting greatest # of categories, success in sorting ALL of any single category without directly touching or depending on visual identification of items and having no more than one visually dependent sorting category.)

Process

1. After identifying possible properties of typical items found in a recycling bin, you will be given a unique bag of recycled items. Mass this bag before opening it_____. DO NOT SPILL or SWEEP away any of the contents or you will lose points as a penalty.

2. On your team's butcher paper, you will design the order and stations for sorting the recyclables. Draw 7 circles, about 5" in diameter on your butcher paper to place your sorted recyclables and label them: PLASTIC; CARDBOARD; GLASS; STEEL; ALUMINUM/COPPER; COMPOSTABLE; SOLID WASTE. As the items are sorted, they will be placed in these circles.

3. You have a budget of $90 to spend on equipment and supplies. ONLY the equipment supplied in the tubs are available for use. (If you want another type of supply, you can request it from your teacher and if it can be made available to all teams, it may be considered.) Teams will take turns purchasing equipment. Keep track of all purchases on your ACCOUNTING SHEET.

4. As you work, one person should record a FLOW CHART of ideas. (See example.) This should document brainstorming, choices made, things that worked or didn't work. It should show how your engineering process evolves.

5. At the end of your first work session, be prepared to present your process and budget, what worked and why and what your next steps may be. At this point you will also respond to a self reflection about your part in the process.

6. Engineering is a process that repeats as things are tried and learned and new ideas come up. At this point, all of the recycleable go back in the bag and you can redesign the order, the equipment, the methods to improve your design. Keep a new accounting sheet and continue your FLOW CHART. Be prepared to present your process, budget and whether you were able to improve your results. (In real engineering, this process could repeat many times, stop while research is done, or a new tool could be built.)