Ideas for editing lesson 8 after the lesson study

1. Time management goals/guidelines. Project management skills.
   1. Add to lesson plan:
      1. Share steps with students (same list that Jake created for lesson study)
      2. Set suggested time for each piece OR have students set goal times.
      3. Have teams assign one student to be in charge of helping their team stick to the timeline
      4. **At the end of the class period, have each student complete a “memo”. This can be formated as an email, letter, or another format that makes most sense to the teacher. In this document students write what they accomplished today and what their next steps are. This helps the teacher track progress, and holds students accountable for their group to achieve the goals set at the start of class.**
   2. Documents to edit/review:
      1. Memo described in a-iv. Could also do this digitally.
2. Add in real work experience in the research components
3. Add in examples of cost analysis used by industry
   1. Short video of a professional talking through how they do this in their job. Show students this before they do a cost-benefit analysis
4. Some of the sites/companies are more complex than others. How do we differentiate? How do we support more complex tasks?
   1. **One idea is to differentiate based on interest- allow teams to see the options, and then they select the venue that they are most interested in. Because there is no correct answer to this issue, you could allow 2 or 3 groups to do the same site/company.**
   2. Another idea would be to assign teams their site/company based on your assessment of their knowledge of composting and ability to manage group projects.
   3. A third option is for the teacher to provide scaffolding to teams that are struggling or predicted to struggle based on prior experience. This scaffolding can come in the form of breaking down the type of waste to list (for example, like the SafeCo Field group separated food, bathroom, field, and seats), providing guidance around team roles, more frequent check-ins, or support with finding information online (list of websites to go to).
5. Clarify structures of lesson & what success is.
   1. Provide a rubric on how students will be evaluated. This would give more concrete expectations, but could also limit teams. For example, if they see 10-15 items need to be listed for part a (the waste this venue creates), students are likely to stop when they hit this mark. It helps manage time, but can constrict creativity.
   2. Teacher provides verbal cues and frequent feedback while groups are working.
   3. **Teacher’s role during group becomes the department supervisor, overseeing the teams (like Jake told his kids, he is their boss, not the person that is ‘giving’ them the information). Share students a checklist of what the boss is looking for in teams. Teacher walks from group to group, updating the checklist for each team. This could translate into a participation grade for the day. It should also be shared with students to provide them feedback on what they did well and which areas they need to improve on.** 
      1. Possible checklist: *\*tried to balance action items with behavior. May want to change this to focus on one or the other (action items may be unnecessary because they have the project instructions)*
         1. Team has a system for brainstorming. It is evident who is recording ideas, and how they allow every team member the opportunity to add to the conversation.
         2. Team is keeping track of time, one member redirects the team when they are not meeting the goal and the other members respect that redirection.
         3. All team members are involved in the researching process.
         4. Team identifies 2-3 changes they are going to propose and which waste item it will eliminate.
   4. Share an example of two things Boeing has done to cut down on waste. They have changed the size of the trash can (show model) and switched plastic ware to commercially compostable utensils. This gives teams an example of a possible action they could propose.
6. Directions on group dynamics, structures, norms
   1. Memo in #1.
   2. #4C provides more structure/support for struggling teams.
   3. All suggestions for #5 provide more structure
   4. **Have students use the brainstorming strategy we had discussed using for this lesson.**
      1. **Teams list out as many waste items produced at this site/company. This can be done in a large piece of paper, white board, or with post-it notes. The key is to have it large enough so all team members can see.**
      2. **Each team member has time (set time goal) to think about 1-2 possible solutions.**
      3. **Each team member shares out their ideas. The group has the list so they can discuss which idea would have the biggest impact on reducing as much garbage as possible, and/or which ideas are the most feasible.**
7. Where can we add in Career Connected learning to highlight industry jobs?
   1. Answer to #3.
8. More time to think about the approach to the problem statement. More research about the company.
   1. Provide students a template/graphic organizer to write down information about the organization they are focusing on. Much of this will be information they know, but some groups may have to look up some information. This goes along with the list of waste produced. We could add on information like:
      1. Location(s)
      2. Purpose/goal
      3. Approximate number of people this building serves & employs daily
      4. Other questions that get think to think about the waste created?

Next steps after team discussion on 4/24:

* In lesson plan, have teachers set goal times
* Biggest change: select 1-2 organizations for everyone to identify waste produced. Then, assign a specific change to each group. The whole class votes on the most significant change to the
  + With this, introduce the company at the start of the unit
  + Team identifies the waste product they are focusing on randomly
  + Select your high school, Starbucks, Alaskan Airlines or other appropriate business relevant to your students. List to choose from:
    - WA state ferries
    - SafeCo Field
    - Taco Bell
    - McDonald’s