

Think It — Build It — Write It: The Gemklocx

Pamela Aura Yamaguchi Jordan, PAYJ as she is affectionately known, is a billionaire industrialist. PAYJ has some money she needs to spend quickly to avoid taxes. She has always wanted to sponsor an inventor. She is looking for a team of two to invent the *Gemklocx*. She doesn't care what the *Gemklocx* is or even what it does. She is looking for a team to design, build, and document the building process of the product in a 20-minute time period. She will then hire others to build the *Gemklocx* from the written directions. There are certain requirements for this project. PAYJ has a list of materials that must be included in the invention. Each item on the list is from one of her subsidiary companies.

Your team task is to invent a *Gemklocx*. But beware: PAYJ does not like pictures. You cannot use any diagrams or illustrations to explain your procedures. The team that produces a *Gemklocx* that looks most like the original will be sponsored by PAYJ's company. *Good luck!*

Materials

- 2 small paper plates
- 4 twist ties
- 2 straws
- aluminum foil 12 in x 12 in
- 1 small paper cup
- 2 paper clips
- 3 rubber bands
- 1 sheet of paper
- 8 cm of tape

Procedure

- Partner with another student to form a team and get one set of materials to use in building the *Gemklocx*. You will have 20 minutes to create and build a model as well as to record a procedure to repeat the construction. All materials must be used.
- Use the left side of your INB to record the procedure. Partners will have identical procedures since they are working together, but each person should have a copy in the INB.
- You must keep your original model hidden from the view of other teams. You can use plastic bags, cardboard boxes, or cloth to hide your work.
- After 20 minutes, pair with another team of students and exchange INBs. Each team will get a new set of building materials to build another *Gemklocx* following the procedure in the exchanged INBs. During the 10 minutes you have to build the second model, you will remain separated from other teams.
- Reunite with the team with which you exchanged INBs. Each team will share its model and briefly discuss the results. You will then compare the "rebuild" with the original model.
- Using a different color ink or pencil, the team that created the rebuild will edit the original procedure to provide the team feedback on how to improve their procedures so that the rebuild would look more like the original.

Writing the Reflection:

- Under the procedure on the left side in your INB draw a line across the page. Write a reflection that examines the following three ideas in complete sentences with well-developed paragraphs:

- Paragraph 1) What parts of writing a procedure are easy and why?
- Paragraph 2) What parts of writing a procedure were challenging and why?
- Paragraph 3) What is the role of revision in the scientific process?