

I hope you and your family enjoyed a pleasant holiday. I provided several optional puzzles for students to share with families. Onward, into 2019!

Today in class (1/03) we discussed completing the Socratic Quiz soon after it is activated versus waiting until the last minute. I was amazed **no students** were able to articulate what I consider to be the most important reason of completing it sooner than later. The 10 questions I write for each Socratic Quiz all relate to big ideas and common misconceptions. If students take the quiz earlier, the knowledge they gain should transfer into better work the rest of the unit, including on products and interviews. This led me to another realization. Students (and parents) likely think of summative assessments only as “ends” that allow teachers to evaluate students. I do use assessments this way certainly. More importantly, though, **my assessments also include instruction!** This is a huge, important shift from traditional summative assessments.

Properties of Energy:

This unit had three content goals. The **first** and **third** required no product--students were simply interviewed on these. Students were asked to make an energy transfer flow chart during the **second goal** interview. Here were the three goals:

1. *Define* energy and demonstrate *what energy is* with a variety of objects.
2. *Create* and *explain* an energy transfer flow chart.
3. *State* the Law of Conservation of Energy and explain what happens to a device's energy as the device stops moving.

For many students it was easy to provide proper definitions for **energy** and for the **Law of Conservation of Energy**. It was an entirely different thing, however, to show they truly **understood** these definitions. This is not surprising. For many students, much of school

has been memorizing what teachers tell them, and then parroting back these definitions on tests. It's one reason I've left my traditional system behind. We need to give students practice *using* definitions and ideas. We all must recognize that true, deep understanding takes much longer than rote memorization. In addition, there are many layers to any big idea. Students who complete more activities in a given unit tend to gain more layers to their understanding. Students who progress more slowly could complete some activities at home, so they, too, may deepen their knowledge base.

Scores on Aspen:

Here is a description of the tasks you will see in Aspen for *Properties of Energy*.

POP:

P of E POP Week 1, 2, 3...: These weekly scores describe how well students did their jobs in class (followed directions, handled equipment properly, brought materials to class, remained on task) during our unit.

Gravity Reducer complete and on time: This was our second Engineering Project of the year. (You can see still photos of the projects on the homepage of my website.) All that's required to receive a 3 is to bring a Gravity Reducer in on time (students had one week to compete it.) Even if the project doesn't work, if it's apparent that thought went into it, it is still a 3. **19 students failed to bring a Gravity Reducer to class by the due date--inexcusable.** The next engineering project will be assigned mid-January.

Properties of Energy Socratic Quiz on time and directions followed: Each unit, as you know by now, the Socratic Quiz serves as one summative assessment. Many students should be doing the quizzes *sooner* than they are (I give them 2 weeks to complete the quizzes). Students will be in better position to interview on their products if they've already completed the Socratic Quizzes.

Academic Standards:

Here are the four product goal scores for Properties of Energy:

1. **Interview:** *Define* energy and demonstrate *what energy is* with a variety of objects.
2. **Product and Interview:** *Create* and *explain* an energy transfer flow chart.
3. **Interview:** State the Law of Conservation of Energy and explain what happens to a device's energy as the device stops moving.

Properties of Energy Socrative Quiz: This is the final academic task in Aspen.

Good news about Aspen:

Remember, here's how to make science results as clear as possible on Aspen. As always, go to **Science**, and then click on "**assignments**" (the first science screen doesn't give you useful information). Near the upper right are two drop down menus. One is for **trimester**. Trimesters are meaningless in science. I suggest keeping it on "**all**".

The other drop down is for **standard**. POP is the work habits (non-academic) standard. The academic standards, in the order we are working on them, are Science Process Skills, Properties of Matter, Cells & Genetics, Properties of Energy, and Forces & Motion.

Guest Presenters:

As I indicated in the last report card, we had two guest speakers who shared information with us related to Cells & Genetics. First, was a geneticist--the mother of one of my seventh grade assistants. She helped students carry out a series of activities, including removing DNA from strawberries and conducting bacteria checks around the school. I'm pleased that two parents took me up on the group invite and joined us for Dr. Fonseca's presentation.

Second, Mr. Sutherland helped students understand how his daughter developed a genetic condition (Glycogen Storage Disease, or GSD) that neither he nor his wife have. Since GSD is so rare, it doesn't receive government funding for its treatment. Each year the Monsoon Team donates money to the GSD fund. My suggestion is for each student, if possible, to bring in 50 cents. That would mean we would donate more than \$50 to the fund. I feel it is even better if students can donate money **they** earned babysitting or shoveling snow. We will ask Mr. Sutherland to come up the the pod in late January to receive our gift.

Family Science:

The next Family Science project will be assigned in late January.

Questions? Visit?

Let me know if you have any questions. Feel free to visit our classroom any time.