

Report Cards Already?:

As I explained during our Standards-Based Science Evening two weeks ago, I provide report cards at the end of each unit. We have just completed **Acting Like A Scientist**, our introductory unit. Science Process Skills (SPS)--**doing** science--was the focus of this unit. Here are goals of this SPS standard (from the Next Generation Science Standards--NGSS).

Science Process Skills & Practices:

Students can recognize scientifically testable questions and make plausible predictions. Students can carry out safe investigations, control variables, recognize controls, measure accurately, and record data in a table that they can design themselves. Students can analyze data, graph results, draw conclusions based on evidence, and communicate these results. (All above based on Appendix H of NGSS--Nature of Science.)

Much of our work during Acting Like A Scientist revolved around pendulums. Here is a look at tasks you will see (or will soon see) in Aspen. Tasks are evaluated on a scale from 1-3. (Please see the Aurora Science Class Overview on the Parent Info page of my website. (www.stithsonianscience.com))

- 1: Learner demonstrates little or no understanding of the concept(s).
- 2: Learner demonstrates **some** understanding, but not consistently, and/or student relies on teacher for guidance.
- 3: Learner shows complete, consistent, and independent understanding.

Self Direction:

Most scores in Aspen at this point are in the **SD**--Self Direction-category. Although non-academic, these skills are as important to students' future success as any academic standards. SD scores are the **only ones that cannot be redone**. Instead of dwelling on past missteps, students should focus on improving these skills. Here is an explanation of SD grades you will see in Aspen:

SD WK 1-3, SD WK 4: These weekly scores describe how well students did their jobs in class (arrived on time with proper materials, followed directions, completed tasks on time, took advantage of redo opportunities). There will be a SD WK “X” score most weeks all year long.

SPS Soc SD: This score reflects whether or not students completed the SPS Socrative Assessment on time and if they signed in properly. Note: This is due Tuesday, 10/06, so look for it on Aspen after that time.

Graph SD: Their pendulum line graph was due this past week. Did students complete it on time and follow directions in terms of what data to graph?

Science Process Skills:

These, and all academic items, can be redone. Here is an explanation of the two SPS grades you will see in Aspen:

Pendulum Graph: Each student graphed data for how the pendulum length affected its frequency. *I guided all students* on this initial graph. We watched two “How to Graph” videos together, and discussed how to set up their papers. For this reason, they could not score a “3” on that first graph. I posted a brand new data table (Chirping Crickets), and some students have shown they now can graph accurately and independently!

SPS Socrative: Each student needs to complete the SPS Socrative Assessment. To access this students go to the Acting Like A Scientist page of my website and click on the button for the Socrative Assessment (after writing down the room code below the button!). As students answer each question they get immediate feedback about why the answer is the answer. Scoring: 9-10 = 3; 6-8 = 2; 0-5 = 1. Students may wait 24 hours and retake the assessment if not satisfied at first. Note: It is due on Tuesday, October 6, so scores will not appear in Aspen until after that date.

Properties of Matter:

This is our next unit. Here are the specific goals of this unit: Students can...

- **Provide evidence** that gases are real even though they are usually not visible to human eyes.
- **Provide evidence** that invisible gases are made of tiny pieces (atoms and molecules) that, by themselves, are too small to be seen with the unaided eye.

For the next few weeks, students will carry out investigations (or watch me and other students do so) aimed at providing evidence of these goals. At the end of the unit, each student must **produce evidence** of the two goals. This product could take the form of Google Slides, a video, a labeled diagram, or a written narration. The product will be evaluated as a 1, 2 or 3 and **each student will also be interviewed individually** to make sure he or she truly understands what is shown in the product. I will set up a spreadsheet, and students will sign up for a ten-minute slot during regular class time or PM Get Set time. It will take several days to complete. The rest of the class will have extension activities to work on during interview days.

Questions? Email me at dstith@londonderry.org