

Polite Kids!

The Monsoon teachers and I are impressed by how polite and pleasant this year's team of students has been. The related arts teachers switch teams each trimester, and they, too, have remarked about this! Thank you, parents!

Where We Are:

We are completing our second-to-the-last full unit of the year--Forces & Motion. This unit had four content goals. [Since each goal had its own product and interview, you will see **eight** different scores for Forces & Motion on Aspen.]

How They Did:

Students had more trouble, overall, on these goals than on other content goals this year. There were two big problems. First, many students simply did not follow directions. This was a major concern of mine at the beginning of the year. Then students made big improvement. Not this unit--time to refocus!

Students completed force diagrams with no forces listed! They also did their similarities and differences without mentioning gravitational fields! I know when it was direction following rather than understanding, because they could communicate their knowledge much better in the interviews than they did on their products.

The second problem was many students did not truly understand the material. I know this because, even with guidance, they could not explain the material. In addition, **comparing** and **contrasting** are higher level thinking skills. So much of school for these students has been low level rote memorization. Students need practice at higher order thinking.

Now What?:

Due to the large number of poor products and interviews, I am devoting **every day** of Storm Time next week (5/7-5/10) to re-interviewing students. If even more time is

needed, I will continue this into the following week. Time for students to step-up and show some perseverance.

Scores on Aspen:

Here are the tasks you will see in Aspen during the time we were studying *Electricity*.

POP:

Match off Washer: This was the first activity of the unit, and was a group activity. Students were challenged to move a match off a steel washer, both of which were under a plastic cup. They were not allowed to touch the cup with any object. The POP portion of the grade was based on following guidelines, writing a clear plan, and not asking unnecessary questions.

Forces & Motion 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.

Socratic Forces & Motion Assessment on time and directions followed: [11 students did not complete this on time.] As you know, the Socratic Assessment serves as *one* summative assessment for the unit. Many poor scores were not redone in the two and a half weeks they had to do so. This is another reason products and interviews were as poor as they were.

Self-Closing door complete and on time: This was our first Engineering Project of the third trimester. All that's required to receive a 3 is to bring in a device on time that shows legitimate effort (students had a week to compete it.) The project doesn't need to work perfectly. Fewer students failed to complete this than the past two projects. In addition, there were many thoughtful, well-designed projects!

Cardboard on Time: Following the product interviews, students were engaged in one of four projects: Windmills, Sail Cars, Gutter Cars, and King/Queen of the Hill. Each project gave students the opportunity to *apply* their understanding of forces to a real-world machine. Cereal box cardboard was the primary building material for these. **Note:** Cardboard is due May 9.

Forces & Motion Academic Standards on Aspen:

Match Off Washer: The academic part of this score was based on students using different forces they'd studied this year to move the cup, the washer, or the match.

Force diagram for object at rest: Both product and interview. [Relate it to *inertia* during interview.]

Force diagram for object that is changing speed: Both product and interview. [Relate it to *inertia* during interview.]

Similarity between gravitational fields and magnetic or electric fields:

Difference between gravitational fields and magnetic or electric fields:

Forces & Motion Socratic Assessment:

Next Unit:

Sound & Light. Here are the product goals for that unit:

Content:

1. Explain the energy transformation that occurs in a solar cooker. [What energy goes in and what does this energy change into?]
2. Describe materials that **reflect** light waves really well and why this would be desirable in some parts of a solar cooker.
3. Describe materials that **absorb** light waves really well and why this would be desirable in some parts of a solar cooker.
4. Describe materials that **transmit** light waves really well and why this would be desirable in some parts of a solar cooker.

Skills:

1. Analyze data you collect to show which cooker design (initial or re-design) is the more effective cooker.

Important note: Solar cookers are to be built **at home**. There is no time given in class. Students should have no trouble building cookers out of recyclable materials--no money need be spent on this. I can't give all due dates for a while since the project is weather-dependent. The first task is to make and test a solar cooker. The initial Design Log will be due during the second half of May.

All details can be found by going to the Light page of my website. Scroll part way down and you will find Solar Cooker Info. In addition to the written guidelines, there is a helpful video showing cooker designs from a past year.

Family Science:

Eleven students brought in a "racer" for Slow Down. Unfortunately I did not win! I will continue searching for a reason to disqualify those who beat me! Our final project is to create an **Energy Transfer Contraption**. See the explanation video on the Family Science page of my website. Videos of project are due Thursday, May 23.

Questions? Visit?

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