

The Design Loop

STEP 8 - testing and evaluating

Temperature
achieved
above air
temp

Green - 155.9 F
Blue - 131.1 F

Science, Creativity, and Experimental Design

The Stars Challenge at Monmouth University 2010

In the description for this course we tried to connect with you using these statements:

"If the thought of challenging your creativity intrigues you, that's all you need to bring on the first evening!"

"...regardless of the tools used, students will be challenged each week with opportunities to creatively investigate topics in a variety of scientific disciplines. Our experience has shown that our more creative students usually ask the best questions."

It is our hope that we were successfully able to challenge your creativity and show you what that has to do with the design of experiments.

We also tried to work in a little about the psychology of fun and playfulness as many of us truly believe that play is at the source of what leads to new discoveries. For those of you able to attend the session with members of the Experimental Research Group at HTHS, I'm certain you picked up on their sense of playfulness. Hoping to see many of you being just as scientifically playful when you're in high school.

Thanks for a great Fall Semester.

most sincerely,

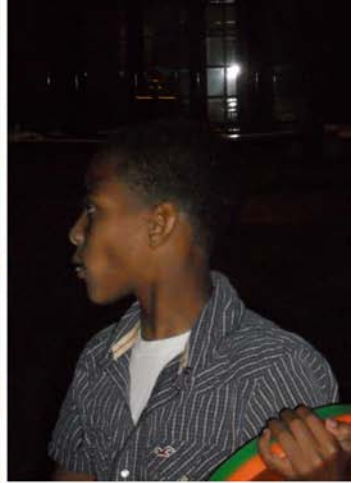
Mr. Roche



The first of many perfect attendance evenings.



A different approach to looking at science.



Off to a flying start with the disc challenge.



Trying to make sense of the disc data.



Caitlin's data collection involving human subject testing.



Motivating 7th grade students with cash and iPads.



Challenging creativity with game design.



Figuring out that 'play' is the free spirit of exploration



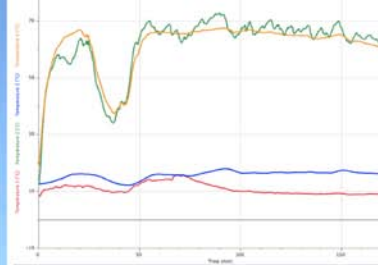
...and exploration is the basis of science.



The psychology of fun: Predicting emotions based on ability level vs. degree of challenge.



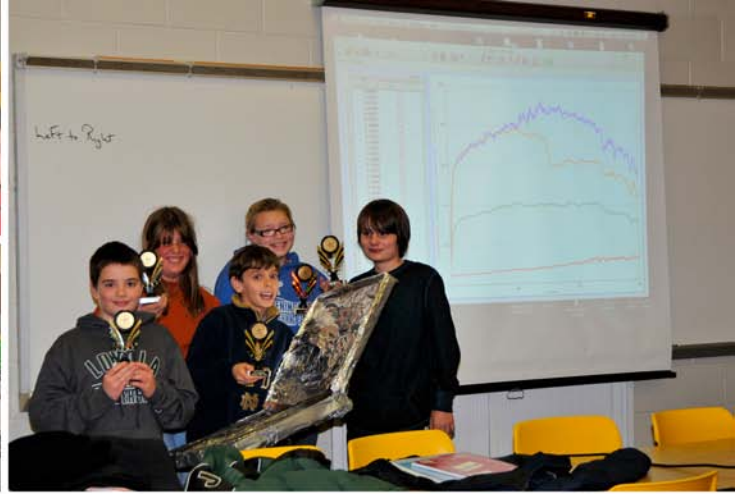
Design and construction of heliothermal collector prototypes.



Field testing, data sets, and modifying the prototypes based on that feedback.







Congratulations to the winning heliothermal collector team!



Did you ever see sound before?





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