

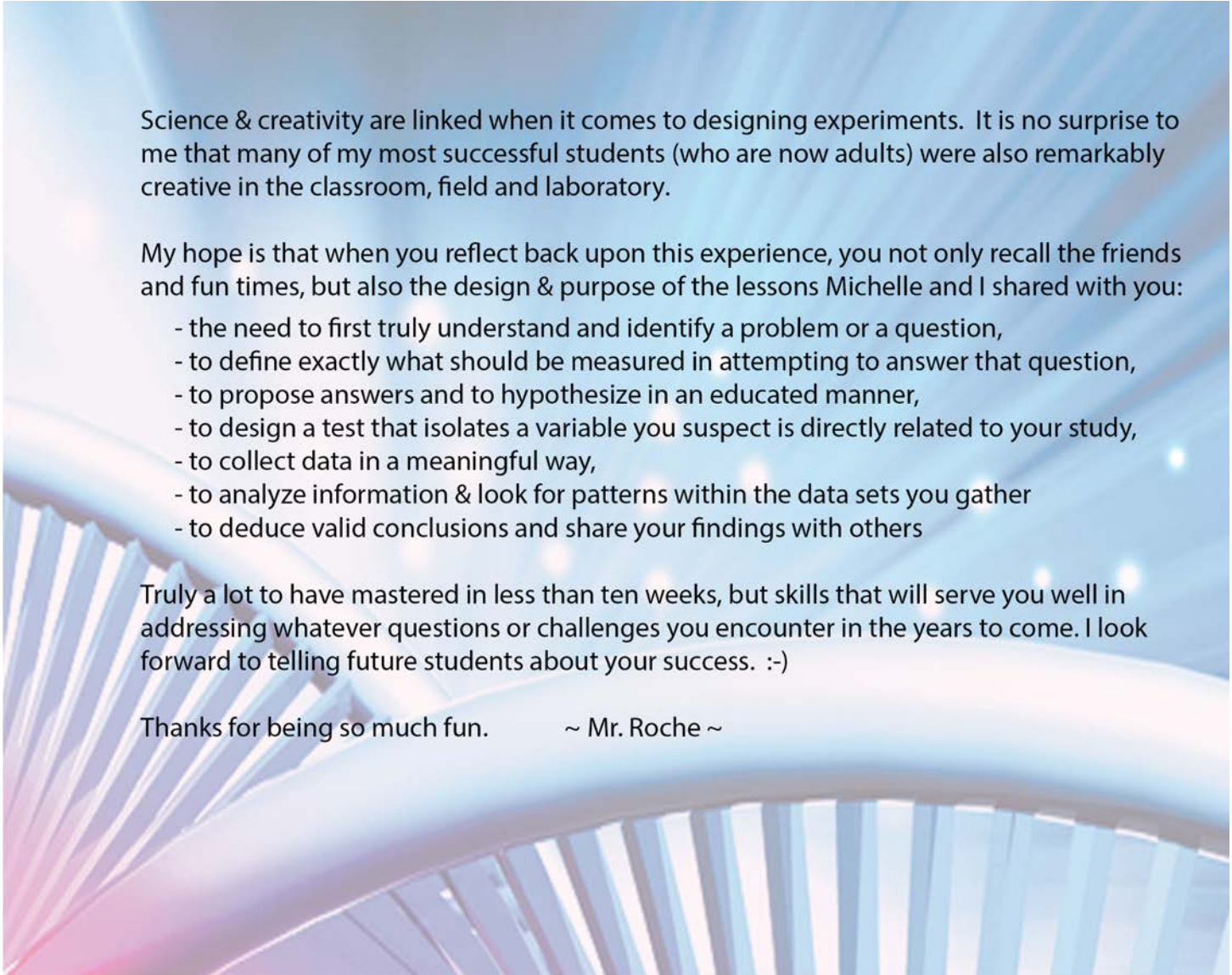


the stars  
challenge

Science, Creativity, and  
Experimental Design

Fall 2013





Science & creativity are linked when it comes to designing experiments. It is no surprise to me that many of my most successful students (who are now adults) were also remarkably creative in the classroom, field and laboratory.

My hope is that when you reflect back upon this experience, you not only recall the friends and fun times, but also the design & purpose of the lessons Michelle and I shared with you:

- the need to first truly understand and identify a problem or a question,
- to define exactly what should be measured in attempting to answer that question,
- to propose answers and to hypothesize in an educated manner,
- to design a test that isolates a variable you suspect is directly related to your study,
- to collect data in a meaningful way,
- to analyze information & look for patterns within the data sets you gather
- to deduce valid conclusions and share your findings with others

Truly a lot to have mastered in less than ten weeks, but skills that will serve you well in addressing whatever questions or challenges you encounter in the years to come. I look forward to telling future students about your success. :-)

Thanks for being so much fun.      ~ Mr. Roche ~



A test!?!? ...on the first night ?!?! (Testing performance of both flying discs and memories of participants)



A fine team with a near perfect attendance record for the entire course.



Trying to find a balance between launch velocities and consistency in distance traveled...



... and attempting to maintain a constant launch angle was more fun than easily accomplished!



The ultimate motivator for middle school students investigating reaction times?



... cash.





Observations - both macroscopic and microscopic



Recording and sharing the team observations led to a number of interesting...



... student designed experiments.



Attempting to make sense of the data / behavior of the organisms.



Clare became somewhat attached to her Tenebrio subjects.



Mr. Roche attempting to shed some light on the patterns within the data sets.

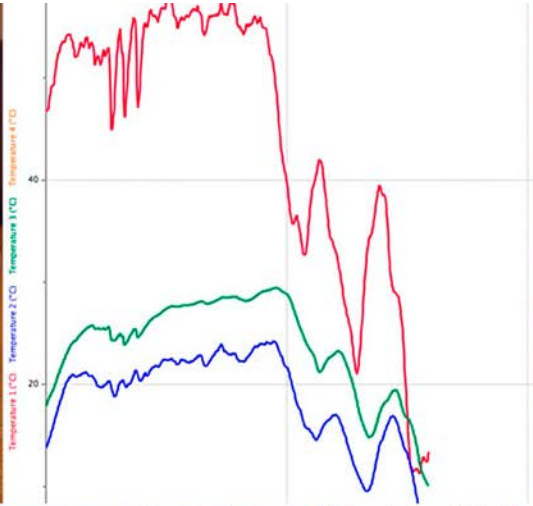


An engineering design project had three teams constructing prototypes...



... and anxious to quantify their performance with data logging software/hardware.





The field trial for the prototypes had a clear winner - (Most impressive, Kyle, CJ & Stephen!).



