DATA TRICKS

Casey M. Bethel | 2017 Georgia Teacher of the Year

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Real Time Data

- **http://tinyurl.com/data2017**
- Choose the one that best fits you.

My Stats

- High school science
- New Manchester High

Enzymatic hydrolysis of 5 Nitro-anthranilic acid aminohydrolase by metal dependent nucleophilic aromatic substitution. ***Nature Chemical Biology*** (2016)

  Technologies, UGA
- Dept. of Biochemistry, GA Tech

Effective Use of Data in My Classroom

- **Student Longitudinal Data System**
- Build a profile of my class beforehand
- Track vital trends throughout the year
  - Attendance
  - Lexile reading scores
  - CRCT / Milestones

Effective Use of Data in My Classroom

- Pre-test vs Post-test
- Student growth
- Student mastery
- Review, Re-teach, Remediate, or Re-think

Data to Drive Student Behaviors

- Success depends on preferred behaviors
- Can I use data to monitor the internal aspects of student behavior?
- Can I use flip that data to drive my students' successful behaviors?

Data to Build Effort

- Students who try harder perform better.
- How do I get students to notice their effort?
- How can they accurately diagnose their effort?

Data to Build Effort

Weekly Effort Rubric

Name: _____

Class: _____

Week: _____

Score	Criteria
5	I was present and prepared for class every day this week.
4	I paid attention and stayed on task all week. I did not have to be redirected.
3	I completed and turned in all assignments.
2	I did my homework or studied each night.
1	I showed up for tutoring or extra help at least once this week.
Circle the areas that you need to improve on.	

Weekly Effort Rubric

Name: Jason Wilson

Class: Biology

Week: 3

Score	Criteria
5	I was present and prepared for class every day this week.
4	I paid attention and stayed on task all week. I did not have to be redirected.
3	I completed and turned in all assignments.
2	I did my homework or studied each night.
1	I showed up for tutoring or extra help at least once this week.
Circle the areas that you need to improve on.	

Data to Build Effort

- Hosted periodic data discussions with students.
- The trend is obvious!
- Students can see that as their effort improves, so does their grade.

Data to Build Effort

- At the end of 9 weeks, I plotted each student's average effort against their mid-term grade.
- This model works for the whole class.
- Overall effort improved for the remainder of the school year.

Data to Build Confidence

- Trying to inspire the next generation of scientists
- Student comments from my early teaching years
  - *"Mr. Bethel, scientists have to be really smart, and I'm just not smart enough."*
  - *"You have to be really good at science, and it is not my strongest subject."*
  - *"I want to be a scientist, but I am afraid of what it will be like in college."*

Data to Build Confidence

- In 2011, I started keeping up with my students who graduated, by email.
- As the responses came back, I started to compile the data.
- I share their comments, and the data with my current students.

Casey Bethel

12/1/2014

Thinking about you folks today.
New Manchester misses you all.
Study hard and do well on your upcoming final exams. Remember, this is your first semester, first chance to make a good impression, to lay a strong foundation.
I BELIEVE IN YOU!!!!

JP

Jonathan

12/1/2014

Mr. Bethel, thank you so much for your words of confidence and encouragement. In moments like these, I really needed it! Have a good rest of the school year and Happy Holidays!

GP

Geral

8/5/2015

Casey Bethel

Reply all

PT

Phung

Wed 8/17

Casey Bethel

Reply all

Action Items

Hello Mr. Bethel,

Everything is going swell so far. I am currently a third year at the University of Georgia pursuing a Microbiology degree with an intent in pursuing an MD degree. Summer was pretty hectic because I was taking two science classes. I am applying to medical school next summer so I am pretty nervous about it. This fall semester I am conducting research relating to Microbial Genetic, 16 hours per week. Medical school is still my passion and I am working hard to get there but please keep me in your prayers! How are you and your family? Are you still working at NMHS? How are your new students?

D

Dawn

Wed 8/17

Casey Bethel

Reply all

Oh how I look forward to these emails.
Second year was NOTHING like I thought it would turn out. I didn't get cast in any of the productions and I was mad (to put it nicely). I actually went back to my dorm and cried myself to sleep, but then at 3 in the morning I shot up and this little song popped in my head. I recorded it and went back to sleep. When I woke up, I had come up with my newest project. Her name is Dawn Keats. She has a YouTube channel: DawnOfTheKeats. Admittedly, after three episodes and one unreleased episode I was stuck about what to do with her. I knew I had something great and so I took a step back from her and worked on scripts for her all summer. She'll be back in the next couple of weeks.

Data to Build Confidence

- Steady increase in the number of students tracked into STEM majors.
- Some of them already into STEM careers.
- 2016 data still being collected.

Data to Build Confidence

Data to Build Awareness & Support

PROJECT MANHOOD Mentoring Group

Data to Build Awareness & Support

- I sponsor a male mentoring group at NMHS
- Teachers would bring me reports on the performance of entire male population

- This caused me to question:
  - Is there a significant difference in the performance of boys compared to girls?
  - If there is, can anything be done about it?

Data to Build Awareness & Support

ACADEMICS

- 500 students failing at least one class: 62 % boys.
- 365 students earning at least one A grade: 59 % girls

Data to Build Awareness & Support

DISCIPLINE

- 630 total students had at least one discipline referral: 59 % boys.

Data to Build Awareness & Support

- S.O.S. – Save Our Sons
- Hosted at the beginning of 2nd semester
- Evening after school
- Boys and their male role models
- Marketed it as a chance to turn things around

ITALY
LADNA
4

Data to Build Awareness & Support

- More than 800 people. More than 450 boys.
- Shared the data with everyone.
- What gets noticed, gets fixed.
- Once you know better, you do better.

The Fire Station Analogy

99 % Success

The Fire Station Analogy

1% Failure

A Story Behind Every Data Point

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