

10/23/15

- ① How do you keep students engaged during note-taking / lecture?
- ② When students finish bell work early, how do you keep them ~~there~~ on-task? How do you prevent behavior issues?
- ③ Where does the Math Lab curriculum come from? Is it based on a textbook?

1) Engagement during lecture has to be tangible / concrete / event.

I need to be able to see it happening. This could be:

- underlying / circling text
- Filling in appropriate blanks
- predicting before discussing, sharing via pair-share.
- Never say anything a kid can say - any build-up in the lesson should be supplied by the students.

I also try to follow the 10-2 rule - 10 minutes of lecture / notes, 2 minutes of checking for understanding. I also think like this when I'm presenting a multi-step process - introduce a step, check on just that step, then move on. What that looked like today:

Skill

identify +/-
slope

CFU

lots of random lines,
hand-signals to
identify +/- slope

recognize slope
as y/x , not
 x/y

→ practice problems
w/ hand responses;
discussion about
incorrect choices

Finding intersection
points of graph

→ do ^{only} this step for first
3 problems

Some quick engagement / CFU strategies
that I use a lot:

- Thumbs up / down
- multiple-response w/ hands
- predict & share w/ neighbors,
then cold-call for answer
- have practice built into
notes for SS to try.

2) For bigger classes, part of my routine is to stamp bellworks for students who are on-task when the bell rings. Students who finish early get to be my stampers.

A big part of this for me is creating a culture where people are comfortable asking for help and giving help. No one gets left behind. When one of us does better, we all do better.

If I've done this well, then finished students will look for people to help, and students who are struggling will look for helpers. This doesn't always happen, but it's the ideal I strive for.

Other things:

- extra problems that students self-select from my wall of problems

- check their grade in my class
- something curious & mathematical, like Sudoku or origami
- anything that is appropriate & doesn't distract others

I purposely do not give busy work. I don't want to discourage students from finishing work early.

3) For the most part, its all original material from my experiences teaching Algebra & Geometry. I take from a lot of resources - mostly online, although the patterns unit is almost entirely from an NCTM book.

This class exists as a relic from the AIMS Test graduation requirement, so much of the material ~~is~~ was grounded in preparing students for that test. The

This year, the philosophy is to help students pass their classes, so a lot of my work is predicting what will happen in Algebra I & pre-teaching the fundamentals before students see it in their other math class. Soon, ~~it~~ this class will address A-Z Merit specifically, but I don't know what that looks like yet.

Personally, I think every math class in high school relies on your ability to do signed arithmetic (add, sub, mult, div + & - #'s), solve equations, & graph lines. A lot of the curriculum addresses these 3 goals. I also explicitly structure the class to try & build confidence, perseverance, & self-starting in mathematics. Content is spiraled; lots of positive reinforcement; permission to fail & learn from it - all of these are purposefully built into the class.