Merging Leveled Classes in High School Science

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About Us

Joyce Weeg:
26 years teaching
Taught the following biology sections:
AP, Honors, Basic biology for repeating students, Academic (with + without ICS)

Owen Ambrose
12 years teaching
Taught the following biology sections:
Resource, Academic in class support, Honors in class support
Cause For Change

- Clear disparity in representation of racial blend in honors and academic sections
- Gap in opportunities for students whose IEP requires support
- Overall approach for teaching Honors was antiquated, did not embrace NGSS principles
- Placement method was ambiguous
Further Investigation

- Research on leveled classes often supported merged models.

- Leveled system seemed to counteract district initiative of shrinking achievement gap between racial groups.

- Over 70% of students in Academic settings were students of color, whereas less than 30% were white students.

- Teachers from 8th grade communicated that the majority of course recommendations were based on parental requests or lack thereof.
The merged classroom suggestion was met with disapproval by Honors biology teachers but supported by Academic biology teachers.

Those against the idea were concerned that students who were not “honors material” could not grow to become such.

We proposed that in order to help all students grow, we had to adopt an instructional approach that better enabled students to show their skill sets.
Our Proposal

- Remove Academic biology from course offerings
- Make all non-replacement sections “Honors Biology”
- Restructure curriculum/delivery style towards focus on higher scientific practice and higher differentiation potential
- Restructure Universal assessments (Midterm and Final Exam) towards higher focus on assessing scientific literacy
Approval and Implementation
Implementation of merged honors biology began in Fall 2016

- Upon having our proposal approved we:
  - Rewrote honors biology curriculum to align with NGSS.
  - Created a resource base for all 9th grade bio teachers.

- Our primary focus was tracking student growth in scientific practices throughout the year

- Common planning meetings were critical towards implementation by all teachers
Positive Outcomes

- Positive parent/student feedback
- Clear student growth (in confidence and performance)
- Extremely low % of student failure
- No students miss out on Honors level credit just for needing ICS.
- Racial/Ethnic groups are evenly represented in all classes.
Challenges Ahead

- Most grade 10 (Geoscience) teachers are against merging
- 10th grade science does not follow NGSS aligned curriculum
- Not all biology classes are supported (some challenged students receive less help than others.)
- Some teachers are showing tendency to lower challenge of honors level rather than restructure teaching practice.
- Differentiation sometimes requires extremely wide range of target skill sets.
Thank you