Advancing Equitable Systems and Programming in East Hartford:
A 5 Year Lookback

EQUITY IN MATHEMATICS EDUCATION

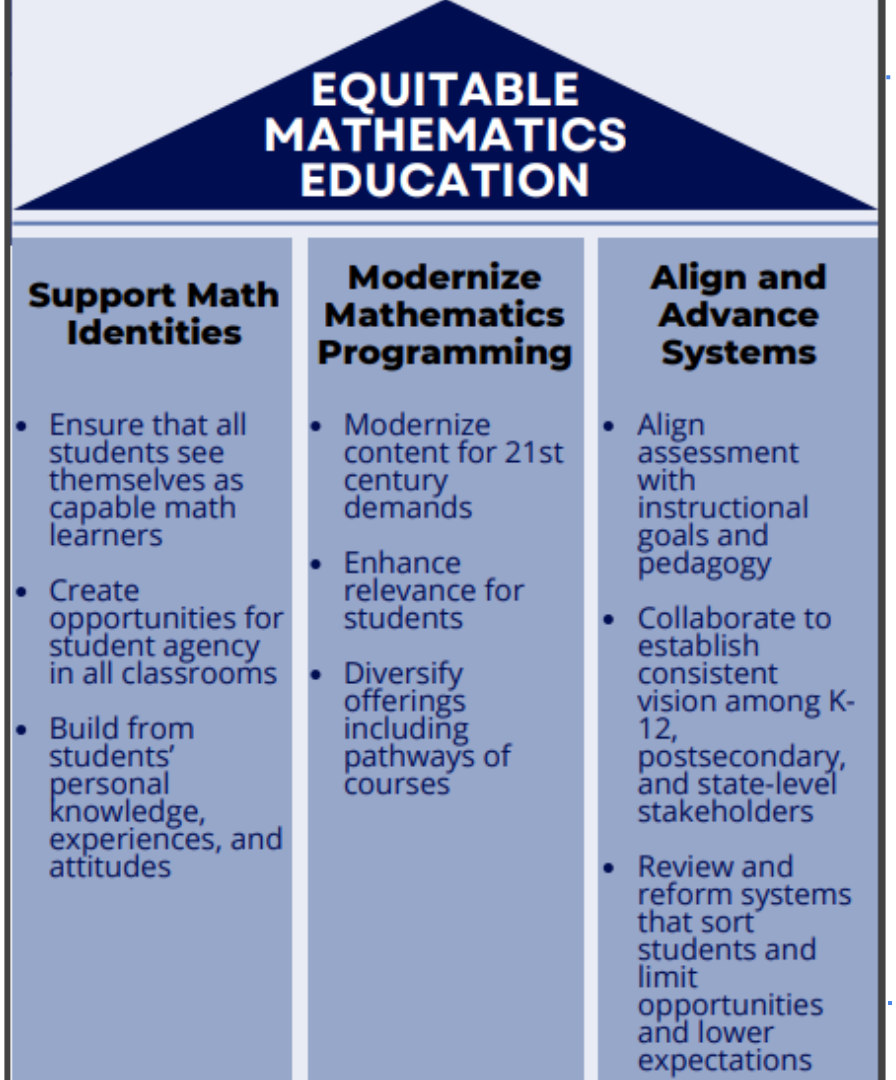
A Joint Position Statement for Connecticut

Equitable outcomes require us to:

01 **Support Students' Math Identities**

02 **Modernize Mathematics Programming**

03 **Align and Advance Systems**



Mission and Vision

East Hartford Public Schools

Vision:

Schools that are the pride of ou

Mission:

To deliver a high quality learning
every child, every d

What is our Vision for Students?
EHPS Math Dept, February 2019 PD Session

- Recall prior knowledge to solve new problems
- Have grit to keep trying if wrong first time
- Understand why things work (no see it/do it math)
- Apply math skills in workplace
- Have grit
- Solve problems/improve problem solving skills
- Apply mathematical concepts both inside and outside of th
- Be able to access and utilize previous knowledge
- Future job → after high school
- Independent
- On own – problem solving – new
- Upon graduation, students can apply math concepts to sol
  concepts include creative strategies to solve problems nev
- Students will be ready for what ever that next step is. Rea
  for military training, ready for trade school, no "developme

How do our structures, curriculum, instruction, and assessment practices align with our vision for students?
February 2019 PD Session

This agrees with our vision. . .	This does not agree with our vision. . .
Problem based instruction	
~ Problem based instruction o Reducing content assessed	
Problem based instruction SAT/ Midterms/ Finals idea agrees in that it is based on curriculum Agrees with focus (getting rid of Alg1L2 More senior electives	
5 practices (problem-based instructions) Less assessments → more meaningful	Pre-calc L1 (only senior?)
5 practices → problem based instruction	Teaching 4/5 of the same course – now it's not even a different level → for 9th

Figure 1

School Culture Triage Survey

SCORING: 1 = NEVER 2 = RARELY 3 = SOMETIMES 4 = OFTEN 5 = ALWAYS OR ALMOST ALWAYS

Professional Collaboration

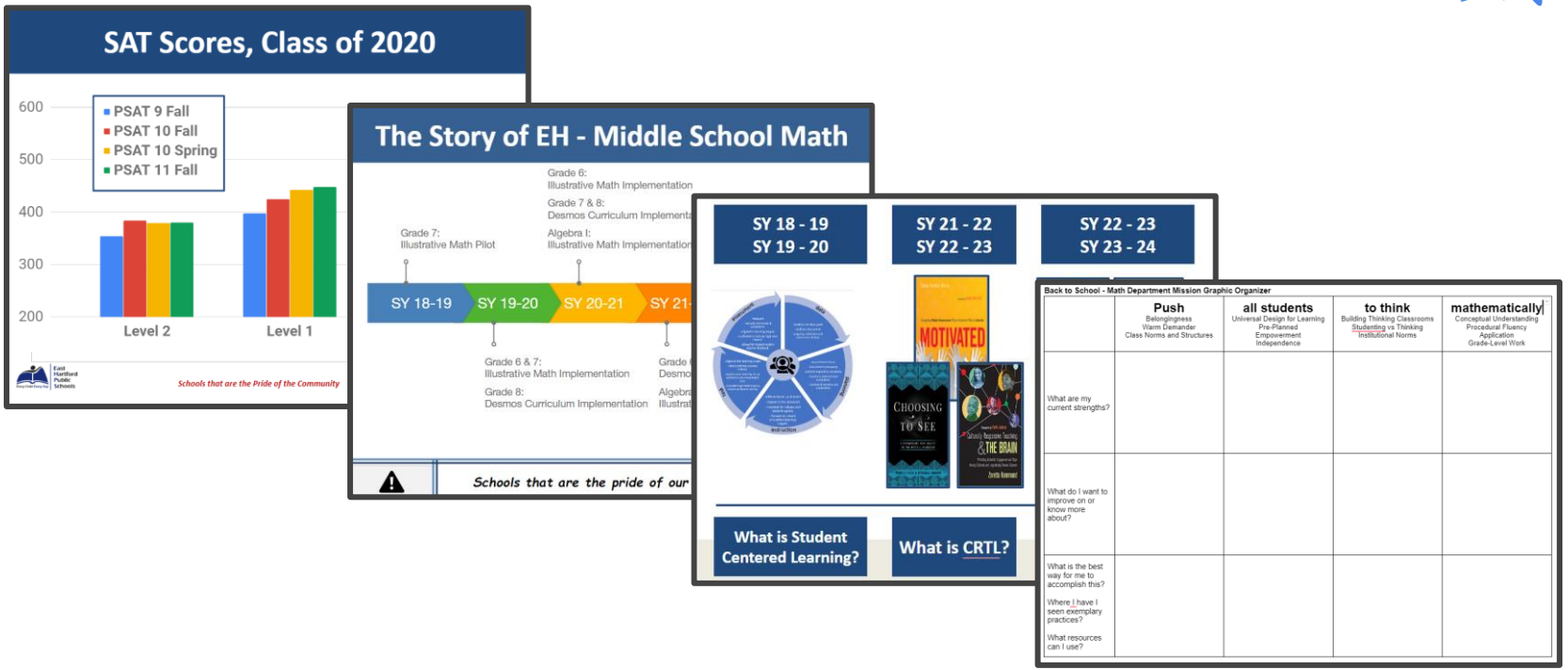
1. Teachers and staff discuss instructional strategies and curriculum issues. 1 2 3 4 5
2. Teachers and staff work together to develop the school schedule. 1 2 3 4 5
3. Teachers and staff are involved in the decision-making process with regard to materials and resources. 1 2 3 4 5
4. The student behavior code is a result of collaboration and consensus among staff. 1 2 3 4 5
5. The planning and organizational time allotted to teachers and staff is used to plan as collective units/teams rather than as separate individuals. 1 2 3 4 5

Affiliative Collegiality

1. Teachers and staff tell stories of celebrations that support the school's values. 1 2 3 4 5
2. Teachers and staff visit/talk/meet outside of the school to enjoy each others' company. 1 2 3 4 5
3. Our school reflects a true "sense" of community. 1 2 3 4 5

Empower All Students to Think Mathematically

Continuous Reflection



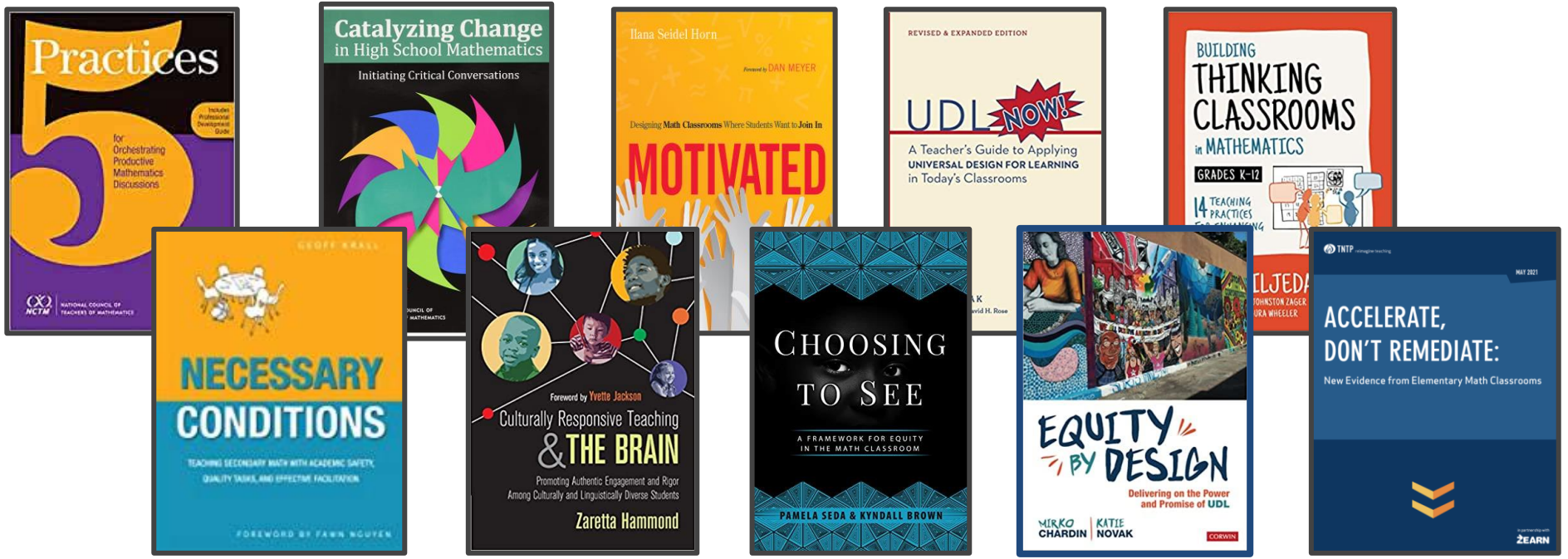
Empower All Students to Think Mathematically

Coherent Curriculum, Instruction, and Assessments

Looking Back to SY 18-19

Grade Level	Curricular Resource	Level of Fidelity
6th Grade	Envisions (Pearson)	Still in plastic
7th and 8th Grade	Springboard	Used by some
Algebra I, Geometry, Algebra II	Teacher generated	A mix of old textbooks, teacher generated materials, and CT Model Curriculum
Topics in College Algebra	ALEKS Program	High fidelity and structure
Other High School Electives	A mix of textbooks	Loosely based on a textbook

SY 18-19 | SY 19-20 | SY 20-21 | SY 21-22 | SY 22-23



Illustrative Mathematics

desmos classroom

imagine learning

UCONN UNIVERSITY OF CONNECTICUT

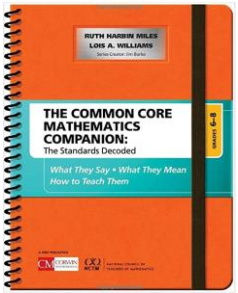
SY 18-19	SY 19-20	SY 20-21	SY 21-22	SY 22-23

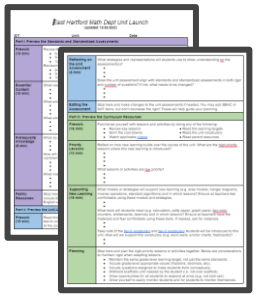
IDT Protocols

smarter BALANCED

SAT®

Unit Launch Protocols

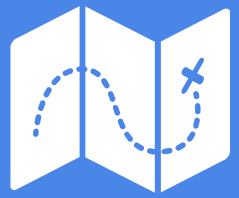




Embedded Coaching

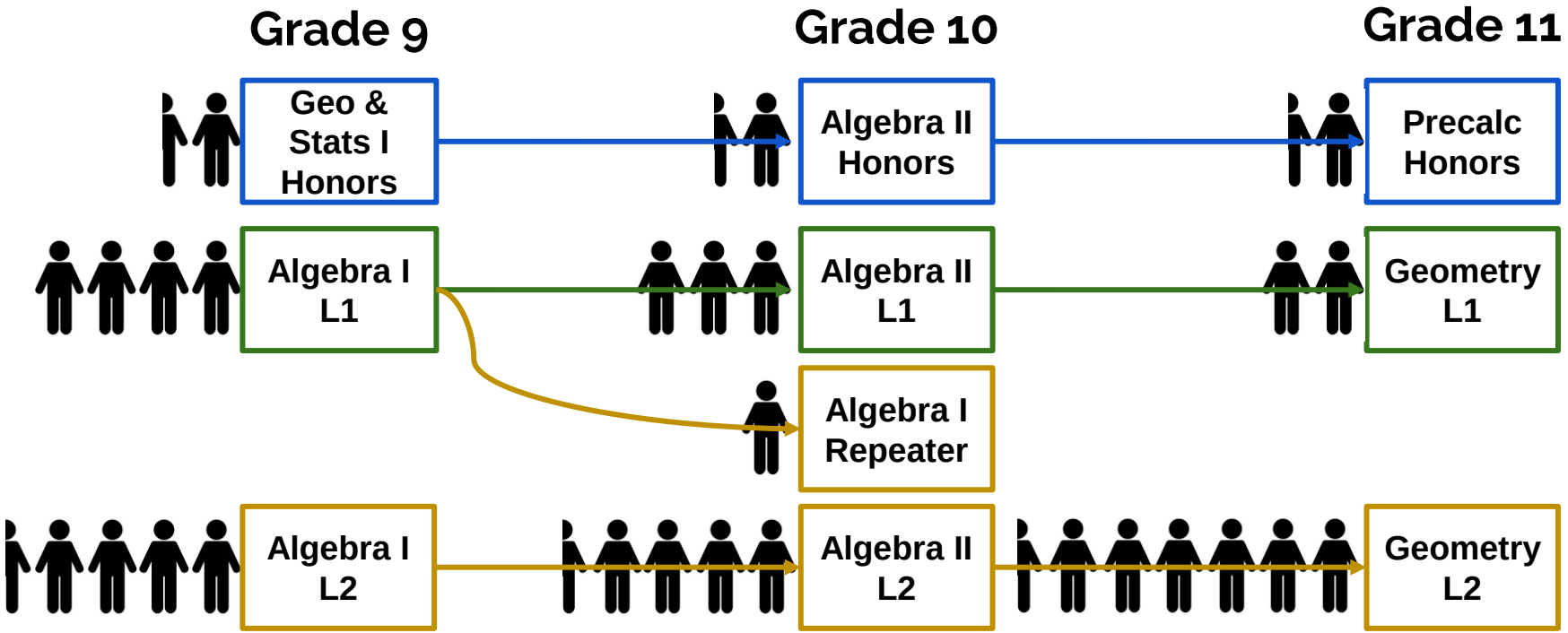
Early Results

Grade Level	Student Achievement	Qualitative Indicators
K - 5	Record high *Percent Target Achieved* on Smarter Balanced	Current grade level teachers express productive struggle Next grade level teachers express thanks
6 - 8	Higher than normal *Percent Target Achieved*	
Algebra I, Geo Stats I Algebra II	Stabilization of SAT Scores	Preference for Problem-Based Learning More students communicating reasoning

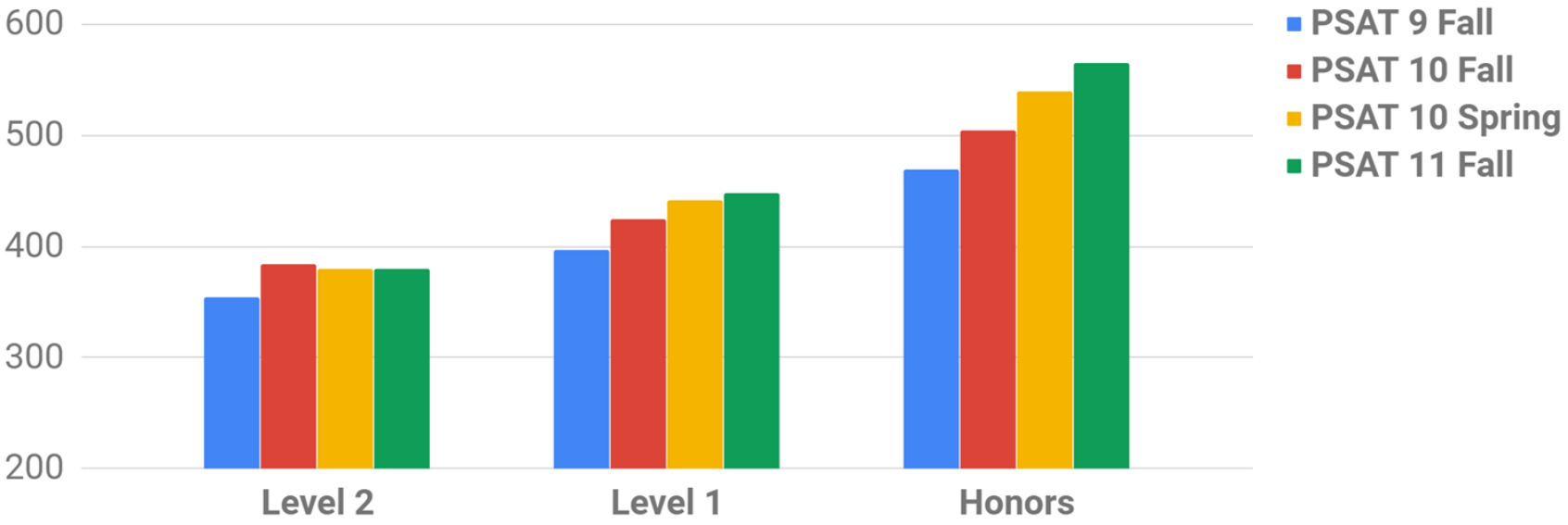


Thinking About Detracking

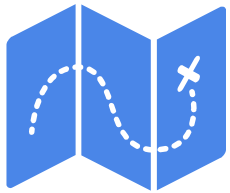
Looking Back to SY 18-19



SAT Scores, Class of 2020

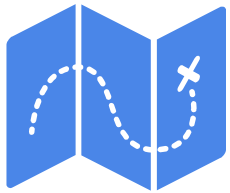


Student Focus Group



- *“Level 2 classes are easier, slower, and cover different topics”*
- *“Level 2 is the dumb level”*
- *“Some people just need more help”*
- *“I think the school would be better without levels, because there would be more ideas and different types of students in each class”*
- Students were split on removing levels

Teacher Focus Group

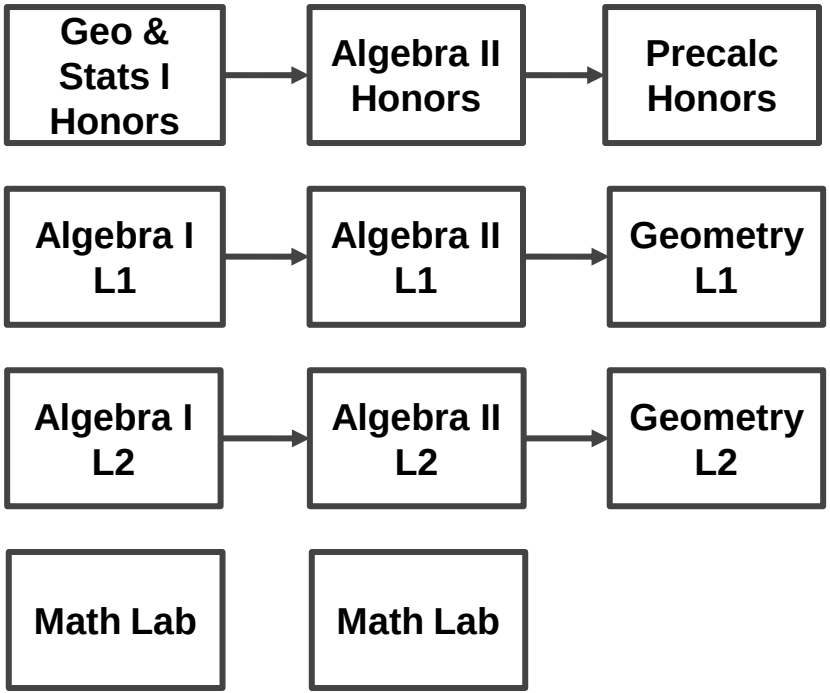


- *I think the entire de-leveling philosophy is primarily in consideration of what's best for our L2 students, and completely neglects the needs/what's best for our higher level students."*

- *"The other issue I have is recruiting... I think we will lose some of our best students to other regional/magnet schools as we de-level."*

- *"I think it is not realistic to expect to have an L1 curriculum taught and to then differentiate to bring L2 students up to speed.*

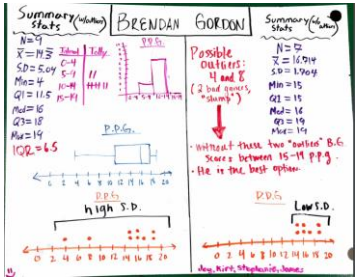
SY 2018-2019


Geo & Stats I Honors
Algebra II Honors
Precalc Honors
Algebra I L1
Algebra II L1
Geometry L1
Algebra I L2
Algebra II L2
Geometry L2
Math Lab
Math Lab

SY 2019-2020

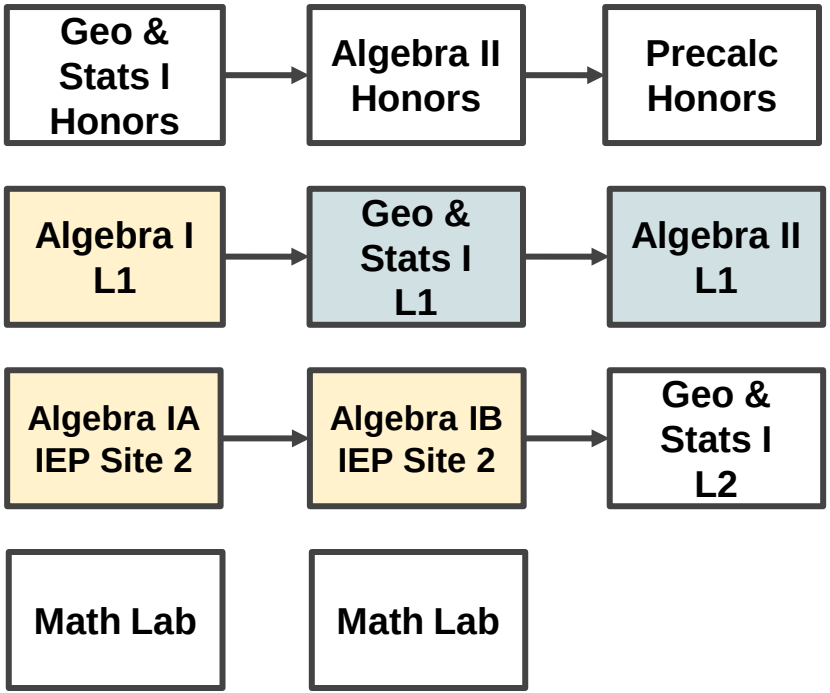
Geo & Stats I Honors	→ Algebra II Honors	→ Precalc Honors
Algebra I L1	→ Algebra II L1	→ Geo & Stats I L1
~~Algebra I L2~~	→ Algebra II L2	→ Geo & Stats I L2
Math Lab	Math Lab	

Open and Engaging Tasks



Tiered Practice

SY 2020-2021



Illustrative Mathematics

How far are we realistically expected to differentiate?

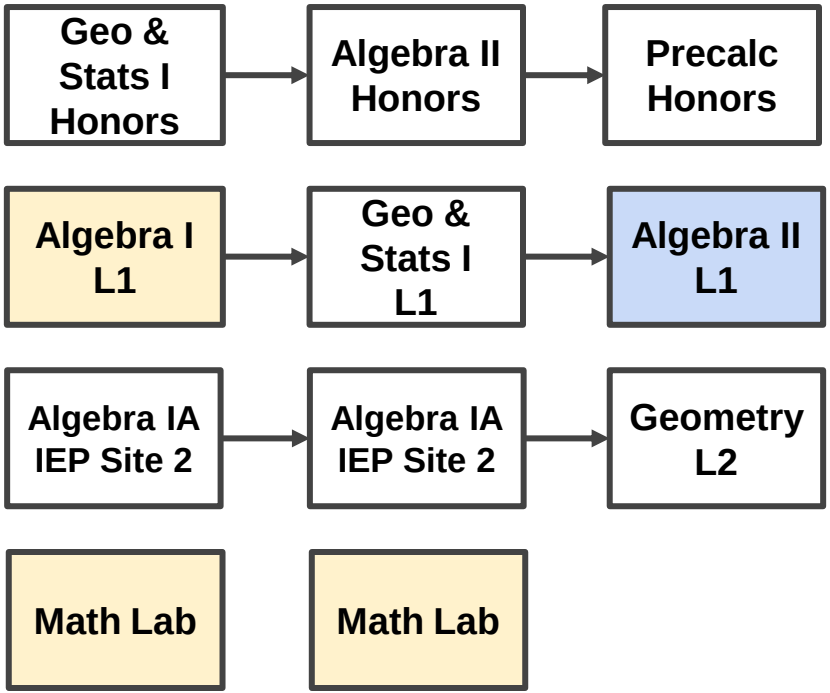
- Algebra I Teacher

Algebra 1A is a PPT Decision

SY 2021-2022

Geo & Stats I Honors	→ Algebra II Honors	→ Precalc Honors
Algebra I L1	→ Geo & Stats I L1	→ Algebra II L1
Algebra IA IEP Site 2	→ Algebra IA IEP Site 2	→ Geometry L2
Math Lab	Math Lab	

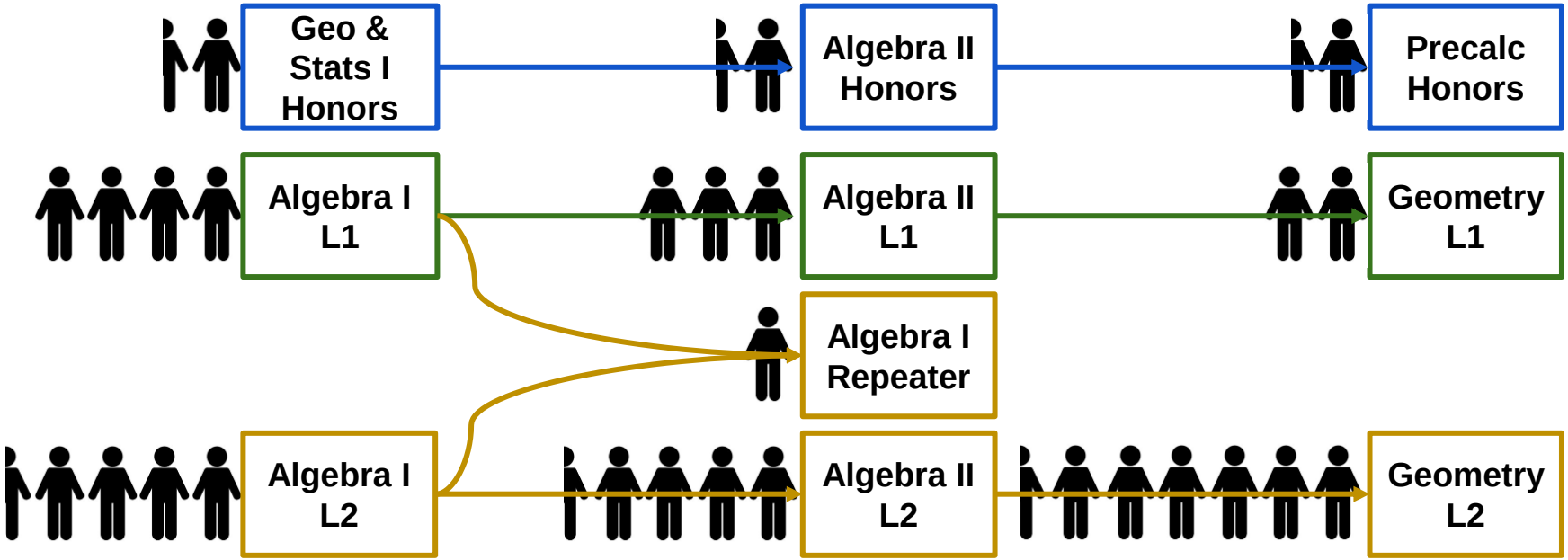
SY 2022-2023



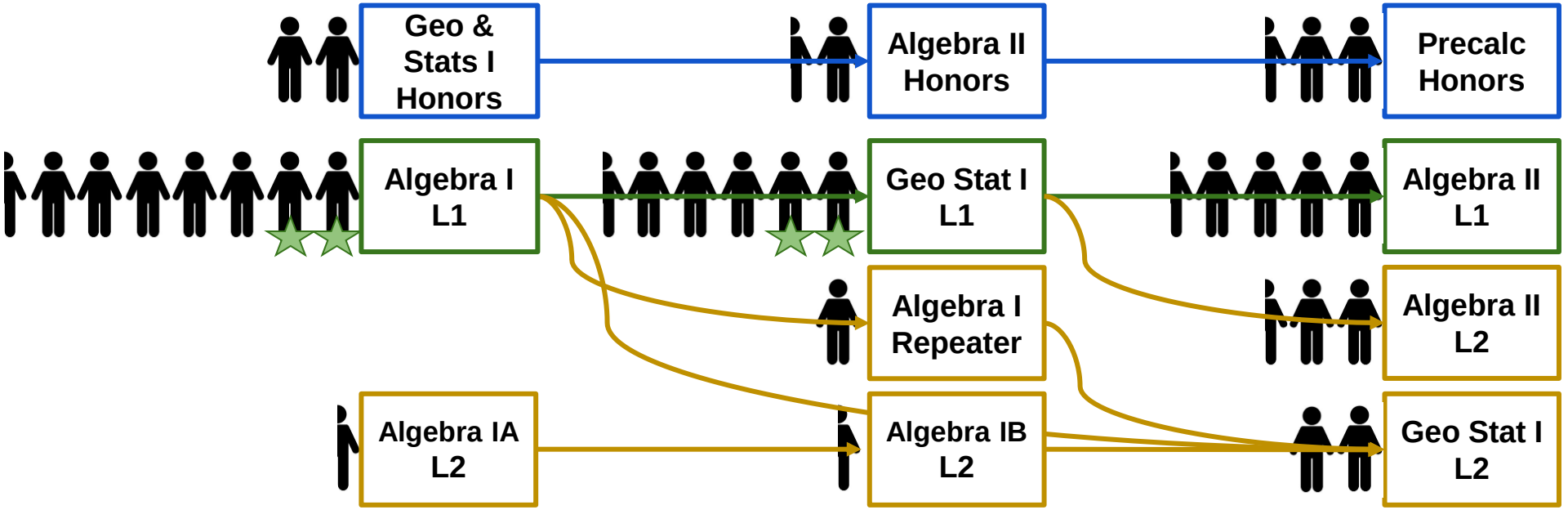
desmos classroom

DELTA MATH RtI PROGRAM®

Tracking in SY 18-19



Tracking in SY 22-23



Electives & Pathways

Looking Back to SY 19-20

- Topics in College Algebra - Focus Group
  - Computer based course that uses ALEKS
  - 11 sections offered during SY 19-20
  - More than half of all seniors

- Why are you taking Topics in College Algebra?
  - Guidance counselor recommendation
  - College placement test

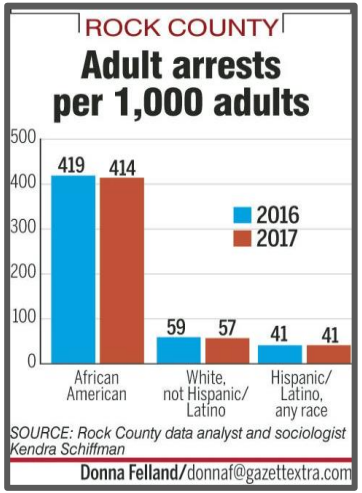
- What are your career aspirations?
  - Business, Real Estate
  - Nurse, Midwife, Social Work
  - Design, Construction

ALEKS®

MANCHESTER COMMUNITY COLLEGE

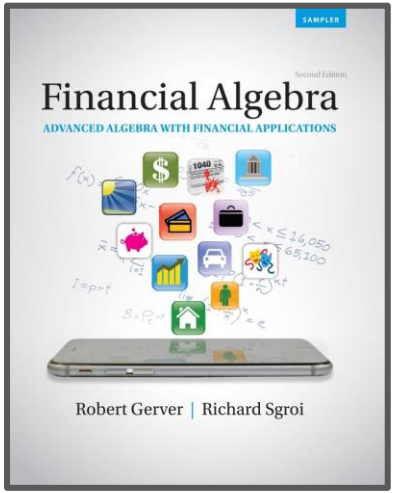
Courses Based on Interest

Statistics II: Social Sciences

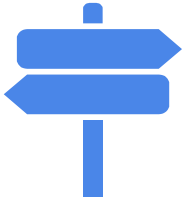


Geometry II: Art and Design

Financial Algebra

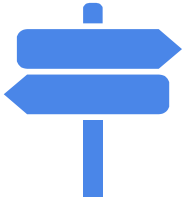


Current Senior Electives



Pure Math Courses for Seniors	Applied Math Courses for Jr/Sr
Topics in College Algebra L2	Geometry II: Art and Design
Topics in College Algebra L1	Statistics II: Social Sciences
Precalculus L1	Financial Algebra
AP Calculus AB AP Calculus BC	AP Statistics

Early Results



Course	Course Requests for SY22-23	Notes
Financial Algebra	117 Students	High interest among students Drawing students from Pre Calc and AP classes
Statistics II	9 Students	Often viewed as two halves of one course, which is not the intention.
Geometry II	9 Students	

Empowering All Students to Think Mathematically

Coherent Instruction - Decreased Tracking - Pathways and Electives

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