

- I. CALL TO ORDER
- II. PLEDGE OF ALLEGIANCE
- III. APPROVAL OF THE MINUTES
 - III.A. January 11, 2016 - Special
 - III.B. January 21, 2016 - Regular
- IV. APPROVAL OF THE AGENDA
- V. PUBLIC PARTICIPATION - The Board welcomes public participation. Pursuant to our Board Policy, public participation is limited to no more than three (3) minutes per speaker and a total of no more than fifteen (15) minutes. People who wish to speak longer are encouraged to attend any and all related subcommittee meetings where most of the board's groundwork is done. We value your input, but due to these time limitations, we ask you to be concise and please do not repeat a previous comment. We know you will observe the rules of common courtesy. Thanks. [9320(a) of Board Bylaws]
- VI. BOARD AND ADMINISTRATIVE COMMUNICATIONS
 - VI.A. Chairman's Report
 - VI.B. Superintendent's Report
 - VI.C. Student Representatives' Report
 - VI.D. Committee Reports
 - VI.D.1. Curriculum (Kevin Hearty)
 - VI.D.2. Policy (Susan Starr)
 - VI.D.3. Communications/Community Outreach
- VII. INFORMATION ITEMS
 - VII.A. Consolidated School Science Discovery
 - VII.B. Board of Education Policies (First Reading)
 - VII.B.1. Policy 3152 – Spending Public Funds for Advocacy
 - VII.B.2. Policy 4131 Appendix – Required In-service Topics for Certified Personnel
 - VII.B.3. Policy 5141.4 – Reporting Child Abuse/Neglect or Sexual Assault
 - VII.B.4. Policy 6142 – Basic Instructional Program
 - VII.B.5. Policy 6142.2 – Reading /Language Arts
 - VII.B.6. Policy 6146 – Graduation Requirements
 - VII.C. Math Program (First Review)
 - VII.D. Search Firm for PPS Director Position
- VIII. ACTION ITEMS
 - VIII.A. Personnel Report
 - VIII.B. Acceptance of Derx Foundation Grants
 - VIII.B.1. Middle School Breakfast Club
 - VIII.B.2. Middle School Student News
 - VIII.C. Acceptance of Donation

VIII.C.1. New Fairfield Middle School PTO

IX. BOARD MEMBER COMMENTS

X. EXECUTIVE SESSION FOR THE PURPOSE OF DISCUSSING LITIGATION

XI. ADJOURNMENT

Math Program Committee

Report and recommendations to the Curriculum
Subcommittee and Board of Education

Committee Members

Matthew Buchta, Teacher

Michelle Ihrig, Math Coach and Interventionist

Tracy Kielkucki, Teacher

Tracy Kochis, Teacher

Kristy Labet, Math Coach

Dr. Jason McKinnon, Chief Academic Officer

Linda Norris, Parent

Robin Padron, Teacher

Ryan Pilner, Teacher

Ryan Ragan, Teacher

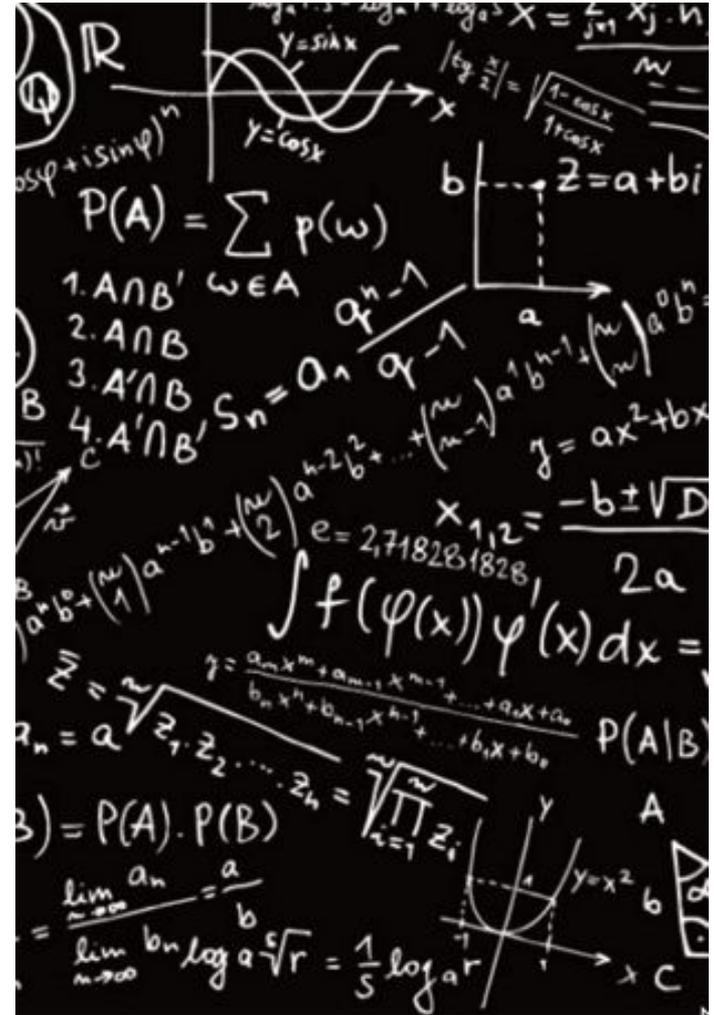
Scott Rohwedder, Assistant Principal

Dr. Alicia Roy, Superintendent

Lou Russo, Teacher

Dr. Amy Tozzo, BOE

Robin Welton, Math Coach



Overview of Presentation

Section 1: The Process

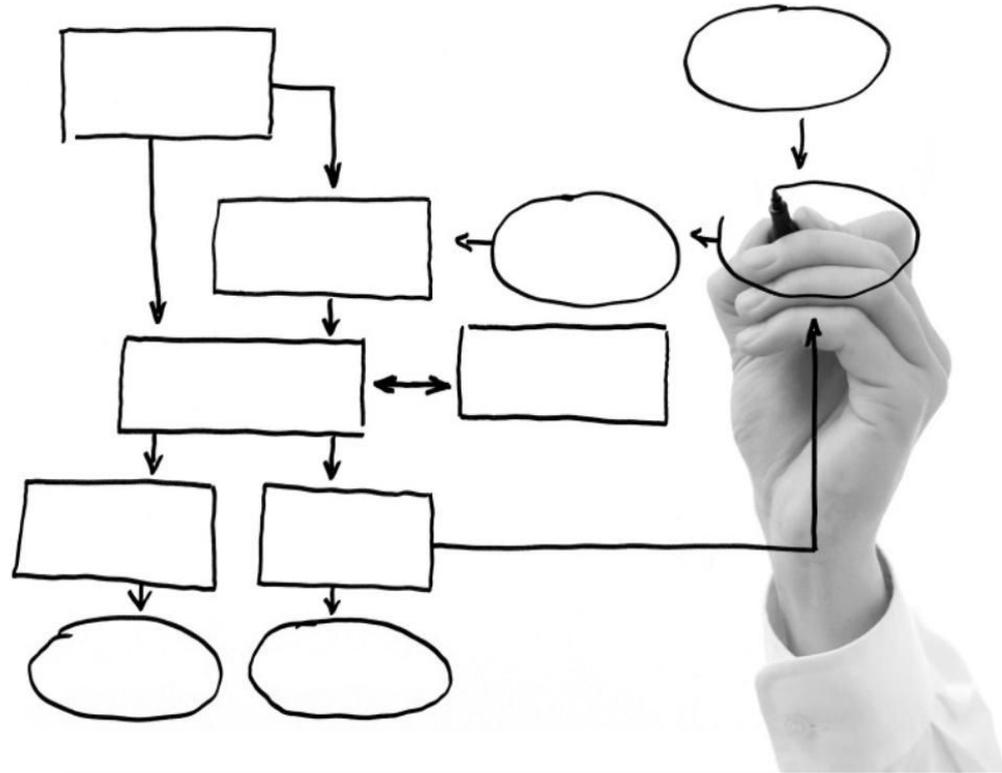
Section 2: Big Ideas

Section 3: Implementation

Section 4: Teacher Training,
Fidelity, and Student
Assessment

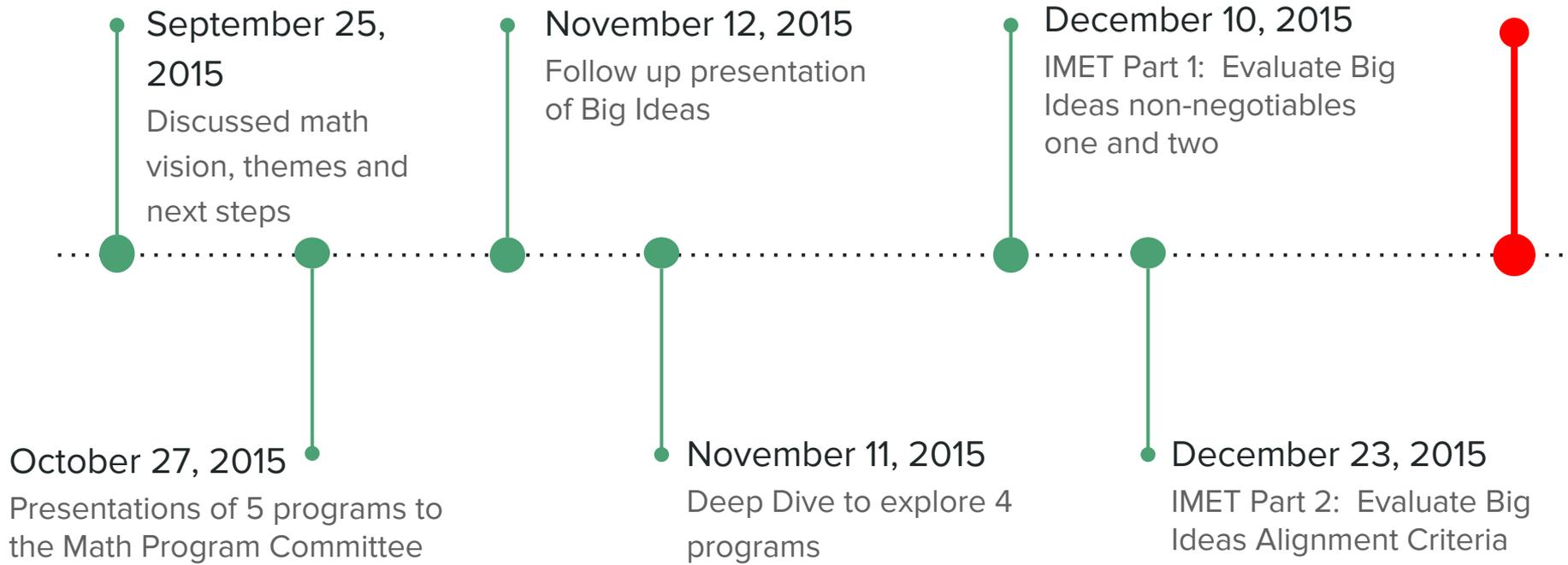
Section 1

THE PROCESS



Meeting Timeline and Purpose

January 25, 2016



MEETING NUMBER ONE

THE MATH PROGRAM
COMMITTEE MET TO
DISCUSS THE GOALS OF
THE COMMITTEE AND TO
TRIANGULATE OUR VISION.

The term “math program” was defined by the committee as the agreed upon **foundation of mathematics** instruction. The committee stated that **all teachers are required** to use the selected math program, once adequate **professional development** was provided in a systematic manner. Other elements—including intervention strategies, resources, enrichment, assessments, tools, and applications—will be **layered onto the program** foundation in order to **increase the effectiveness** of mathematics instruction while valuing **teacher judgment** (Math Program Committee, 2015).

Committee goals that guided our study



ALIGNMENT

THE PROGRAM HAS TO BE ALIGNED TO THE CONNECTICUT STANDARDS AND DEMONSTRATE VERTICAL ALIGNMENT K-12



RIGOR

THE PROGRAM MUST HAVE HIGH LEVELS OF RIGOR AND THAT RIGOR MUST BE CLEARLY DEFINED.



PD



THE PROGRAM REQUIRES SIGNIFICANT PROFESSIONAL DEVELOPMENT FOR TEACHERS TO IMPLEMENT EFFECTIVELY AND WITH FIDELITY.



RESOURCES



THE PROGRAM SHOULD INCLUDE PHYSICAL RESOURCES, SUCH AS TEXTBOOKS, AND INCLUDE A DIGITAL PLATFORM.



INSTRUCTION



THE PROGRAM MUST SUPPORT ELEMENTS OF DIRECT INSTRUCTION, GUIDED INSTRUCTION, INDEPENDENT PRACTICE, AND FEEDBACK TO STUDENTS.



DIFFERENTIATION

THE PROGRAM USABILITY WILL SCAFFOLD TEACHERS' ABILITY TO DIFFERENTIATE TO MEET THE NEEDS OF ALL OF OUR LEARNERS.

Our vision to accomplish this work

Step 1

Presentations

The Math Program Committee reviewed presentations from five programs: HMH AGA, Big Ideas, Math in Focus, Envision Math, and Pearson AGA.

Step 2

Deep Dive into materials

The Math Program Committee narrowed program selection to 3 new programs plus Eureka Math. Small groups reviewed the same unit in each program using a consistent framework.

Step 3

IMET

The Math Program Committee utilized the Instructional Materials Evaluation Tool to determine if our final selection met the requirements of focus coherence and rigor from the standards.

Our vision to accomplish this work

Step 4

Classroom Experiences

Materials are being used in classes to determine their usefulness for effective instruction.

(video)

Step 5

Textbook Adoption

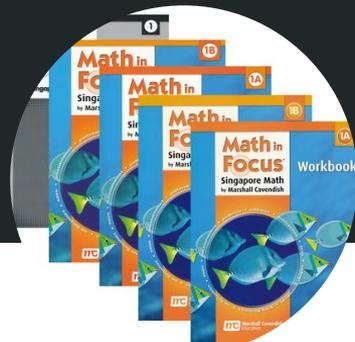
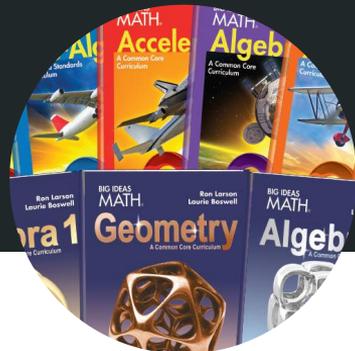
The textbook adoption form was completed using information gained from the program review process

Step 6

Board of Education

The process and program recommendation is presented to the Curriculum Subcommittee and the full Board of Education for review.

STEP ONE: PROGRAM PRESENTATIONS



HMH AGA

BIG IDEAS

MATH IN
FOCUS

ENVISION
MATH

PEARSON
AGA

Grades 9-12
(Go Math 6-8)

Grades 6-12

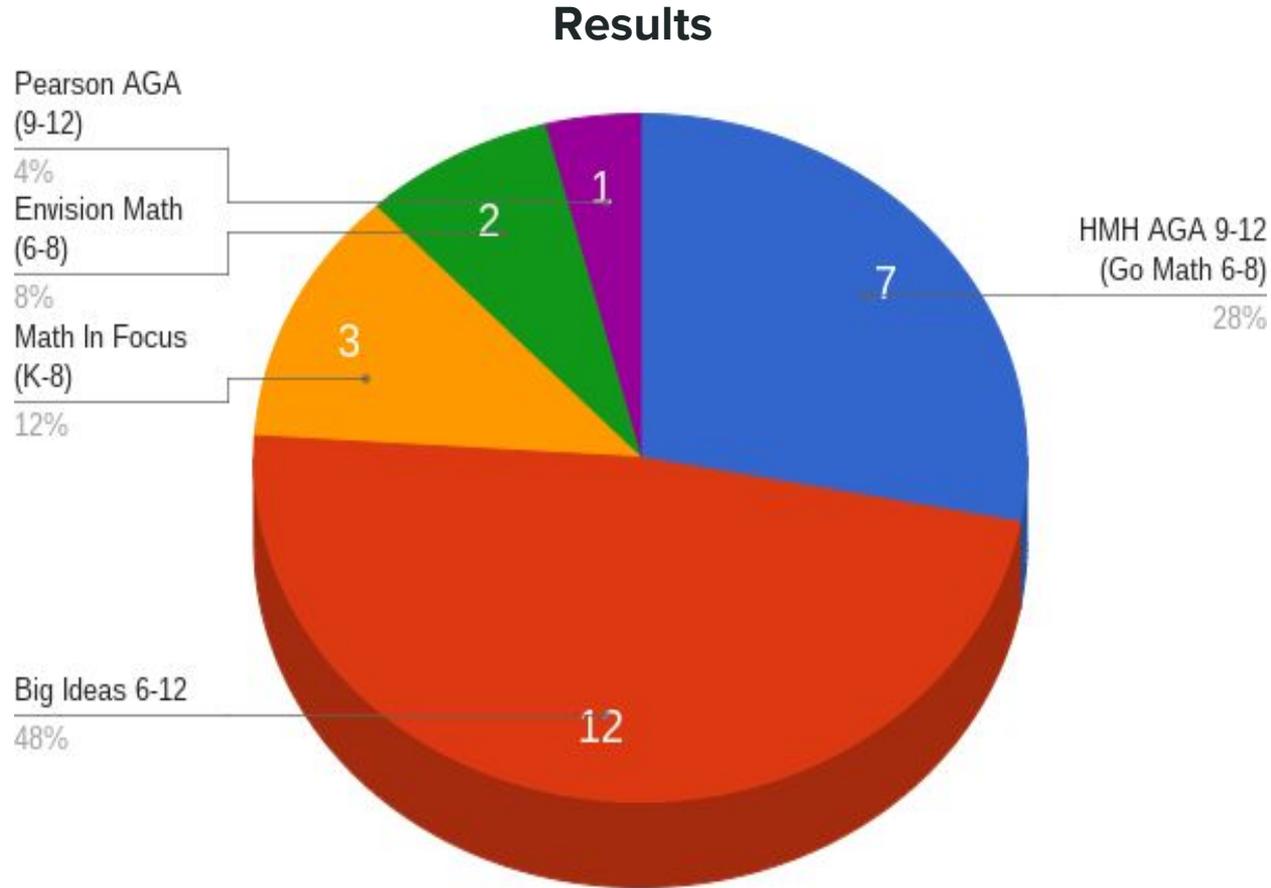
Grades K-8

Grades 6-8

Grades 9-12

The Survey

Following the presentations, the 15 committee members were asked for their input on which programs were the most promising for further investigation.

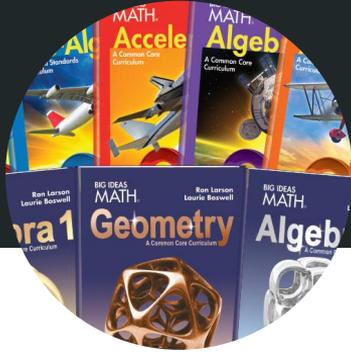


THE FINAL FOUR



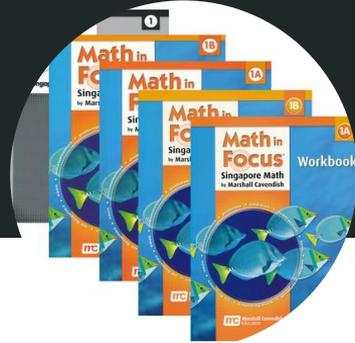
HMH AGA

Grades 9-12
(Go Math 6-8)



BIG IDEAS

Grades 6-12



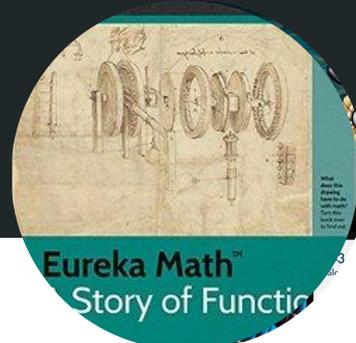
MATH IN FOCUS

Grades K-8



ENVISION MATH

Grades 6-8



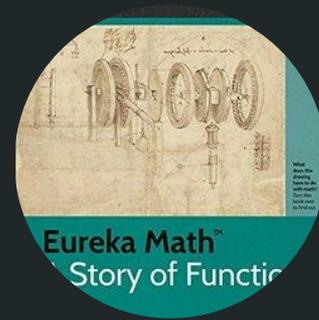
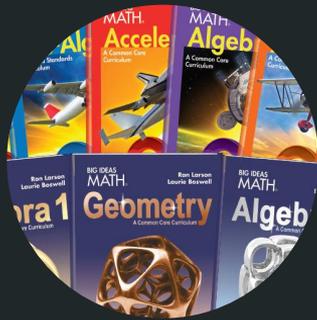
EUREKA MATH

Grades 9-12

STEP 2

THE DEEP DIVE





BIG IDEAS

- ↑ Differentiation
- Rigor
- ↑ Instruction
- ↑ Problem Solving
- ↑ Assessment
- ↑ Usability

STEP 3

USING THE IMET



Big Ideas Math

Program: _____

Publisher: **Larson**

Date of Publication: **2014**

Kochis, Kielkucki, Welton, Labet, Norris, Ihrig

Name of Evaluator(s): _____

Date of Evaluation: **12/22**

Signature of Each Evaluator(s): _____

Non-Negotiable Criteria

Each Non-Negotiable must be met in order for the Non-Negotiable Alignment Criteria to be met overall.

Non-Negotiable 1:

Freedom from Obstacles to Focus

Meets

Does Not Meet

Non-Negotiable 2:

Focus and Coherence

Meets

Does Not Meet

Non-Negotiables Overall

Meets

Does Not Meet

Alignment Criteria

Each Alignment Criterion must be met with a sufficient number of points in order for Alignment Criteria to be labeled as "Meets" overall. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criterion 1:

Rigor and Balance

Points: 6 of 6 possible.

(Materials must receive at least 5 of 6 points to align.)

Meets

Does Not Meet

Alignment Criterion 2:

Standards for Mathematical Practice

Points: 6 of 6 possible.

(Materials must receive at least 5 of 6 points to align.)

Meets

Does Not Meet

Alignment Criterion 3:

Access to Standards for All Learners

Points: 5 of 6 possible.

(Materials must receive at least 5 of 6 points to align.)

Meets

Does Not Meet

Alignment Criteria Overall

Meets

Does Not Meet

Indicators of Quality

Once an evaluation for alignment to the Shifts and major features of the CCSS has been conducted using Sections 1–3, it's important to evaluate for overall quality and best practices. A starting list of Indicators of Quality is suggested below. States, districts, and others evaluating instructional materials are encouraged to add to this list to ensure materials reflect local contexts. For background information on some of the Indicators of Quality in this section, refer to pp.18–21 in the K-8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

| Indicators | Evidence | Rating (Y/N) |
|---|--|--------------|
| <p>1. Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with active participation by all students in their own learning and in the learning of their classmates.</p> | <p>Lesson plans are thoughtfully planned out to actively engage both students and teachers.</p> | <p>Y</p> |
| <p>2. The underlying design of the materials includes both problems and exercises. (In solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery.) Each problem or exercise has a purpose.</p> <p>NOTE: This indicator does not require that the problems and exercises be labeled as such.</p> | <p>Yes, there are extension activities as well as fluency embeded in lessons. There are opportunities for students to apply their learning to everyday life.</p> | <p>Y</p> |
| <p>3. There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion of student ways of thinking and anticipating a variety of students' responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited from students.</p> | <p>Each sections has Laurie's notes where she explains the struggles students may encounter, questioning techniques, helpful hints and ways to motivate students.</p> | <p>Y</p> |

Indicators

Evidence

Rating (Y/N)

4. Manipulatives suggested in the materials are faithful representations of the mathematical objects they represent and are connected to written methods.

Yes, suggestions are given in the lesson plan and in the differentiation

Y

5. Materials include a variety of curriculum-embedded assessments. Examples include pre-, formative, summative, and self-assessment resources.

Yes, there are different leveled assessments given online, pre-tests, warm-up activities and performance tasks.

Y

6. Assessments contain aligned rubrics, answer keys, and scoring guidelines that provide sufficient guidance for interpreting student performance.

Yes, rubrics are given in the assessment section of the online book and answer keys are given in the teacher edition

Y

7. Materials assess student proficiency using methods that are accessible and unbiased, including the use of grade-level language in student prompts.

Yes, there are assessments and student interviews that can be given to demonstrate student learning

Y

8. Materials are carefully evaluated by qualified individuals, whose names are listed, in an effort to ensure freedom from mathematical errors and grade-level appropriateness.

Yes there are student and teacher reviewers listed in the appendix of each book

Y

9. The visual design supports students in engaging thoughtfully with the subject. Navigation through the text is clear.

Yes there are graphic organizers, charts, graphs, study habits and note taking

Y

10. The materials engage parents in appropriate ways. For example, homework assignments in elementary grades consist of routine problems, practice with getting answers, and fluency-building exercises that parents can easily support.

Yes, there are parent notes in both English and Spanish at the beginning of each chapter

Y

IMET Evaluation Summary 1 of 2

Program: Big Ideas
Houghton Mifflin
Date of Publication: 2015 (copyright)

Name of Evaluator(s): Matt Buchta, Ryan Pilner, Robin Padron, Lou Russo
Date of Evaluation: December 2015
Signature of Each Evaluator(s): _____

Non-Negotiable Criteria

The Non-Negotiable Criterion must be Met.

Non-Negotiable 1: Focus and Coherence

Meets

Does Not Meet

Alignment Criteria

Each Alignment must be met with a sufficient number of points in order for Alignment Criteria to be labeled as "Meets" overall. The more points the materials receive on the Alignment Criteria, the better they are aligned.

Alignment Criterion 1: Rigor and Balance

Points: 6 of 6 possible.

(Materials must receive at least 5 of 6 points to align.)

Meets

Does Not Meet

Alignment Criterion 2: Standards for Mathematical Practice

Points: 6 of 6 possible.

(Materials must receive at least 5 of 6 points to align.)

Meets

Does Not Meet

Alignment Criterion 3: Access to Standards for All Learners

Points: 6 of 6 possible.

(Materials must receive at least 5 of 6 points to align.)

Meets

Does Not Meet

Alignment Criteria Overall

Meets

Does Not Meet

Indicators of Quality

Once an evaluation for alignment to the Shifts and major features of the CCSS has been conducted using Sections 1-3, it's important to evaluate for overall quality and best practices. A starting list of Indicators of Quality is suggested below. States, districts and others evaluating instructional materials are encouraged to add to this list to ensure materials reflect local contexts. For background information on some of the Indicators of Quality in this section, refer to pp.16–18 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

| Indicators | Evidence | Rating (Y/N) |
|--|---|--------------|
| 1. Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with active participation by all students in their own learning and in the learning of their classmates. | Exploration, Laurie's notes, Think pair share for student discourse. Essential questions and CC standards are itemize including Standards of Mathematical practice. | y |
| 2. The underlying design of the materials includes both problems and exercises. (In solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery.) Each problem or exercise has a purpose. NOTE: This indicator does not require that the problem and exercises be labeled as such. | Explorations and problem sets include both types of problems. Additional resources have further supplement. | y |
| 3. There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion of student ways of thinking and anticipating a variety of students' responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited from students. | Lauries notes include a pedagogical process to the lesson, ties to math practice as well as CCSS. Notes include instructional strategies and methods of differentiation. Online supports also allow for quick and easy checks for understanding. | Y |

Indicators

4. Manipulatives suggested in the materials are faithful representations of the mathematical objects they represent and are connected to written methods.
5. Materials include a variety of curriculum-embedded assessments. Examples include pre-, formative, summative, and self-assessment resources.
6. Assessments contain aligned rubrics, answer keys, and scoring guidelines that provide sufficient guidance for interpreting student performance.
7. Materials assess student proficiency using methods that are accessible and unbiased, including the use of grade-level language in student prompts.
8. Materials are carefully evaluated by qualified individuals, whose names are listed, in an effort to ensure freedom from mathematical errors and grade-level appropriateness.
9. The visual design supports students in engaging thoughtfully with the subject. Navigation through the text is clear.
10. The materials engage parents in appropriate ways. For example, homework assignments in elementary grades consist of routine problems, practice with getting answers, and fluency-building exercises that parents can easily support.

Evidence

True, algebra includes manipulatives as well as technological supports such as Geogebra and Desmos to model process and ideas

Yes, especially online supports which allows for standards based, preassessment, formative assessment, and summative assessment

Yes, including the standards based assessments. There are rubrics for assessments and alternative assessments with rubrics. Homework, if assigned digitally gives feedback to the student and teacher

homework can be graded automatically if assigned digitally. The resources seem to be at grade level with appropriate language to be accessible to students.

yes as indicated in authorship and review committee in each text

Yes, much white space (no overcrowding), consistent layout and formatting with a text as well as among texts.

There are online and phone in helps for students and parents.

Rating (Y/N)

y

y

y

y

y

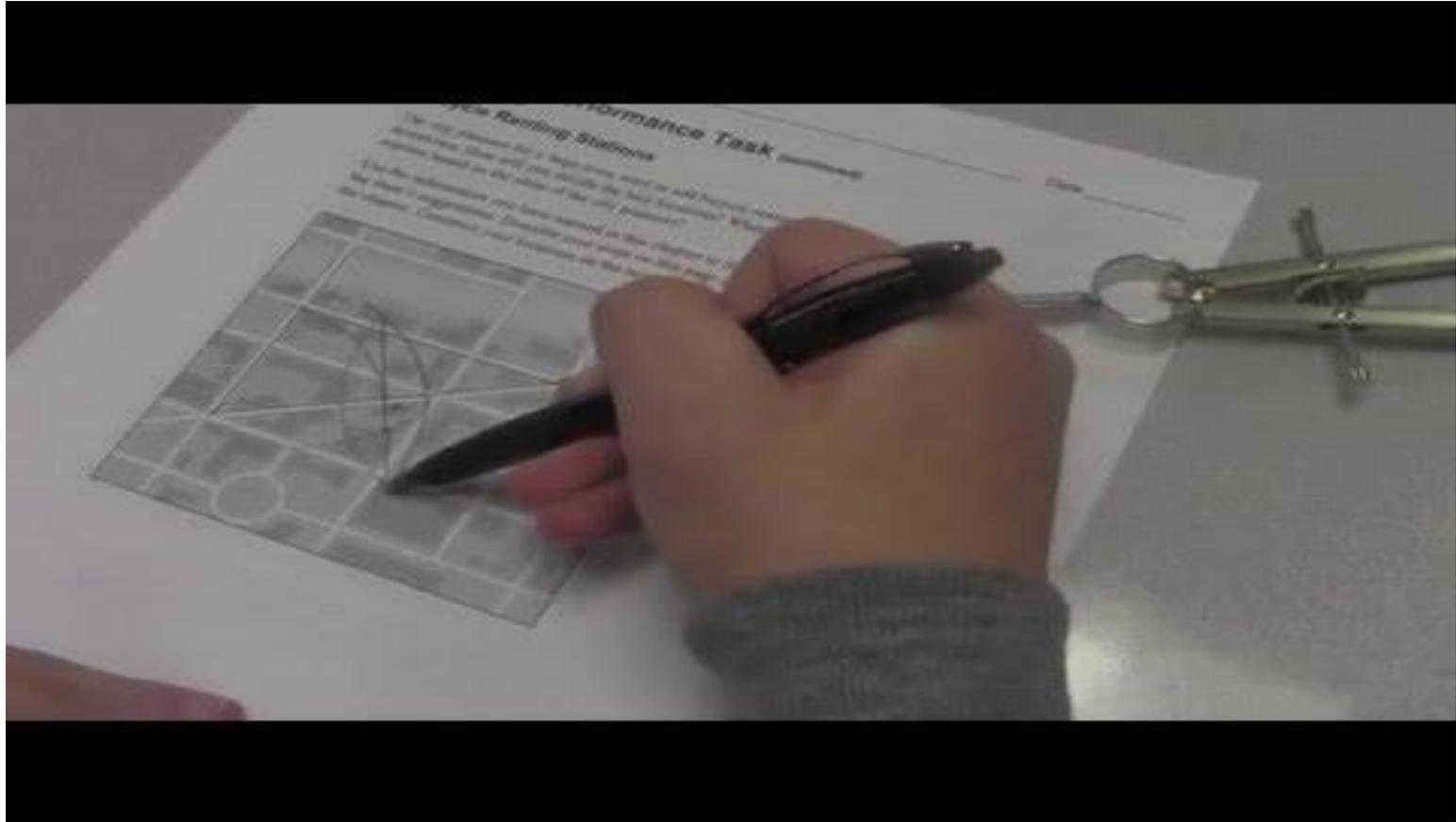
y

y

Big Ideas in the classroom- Grade 6

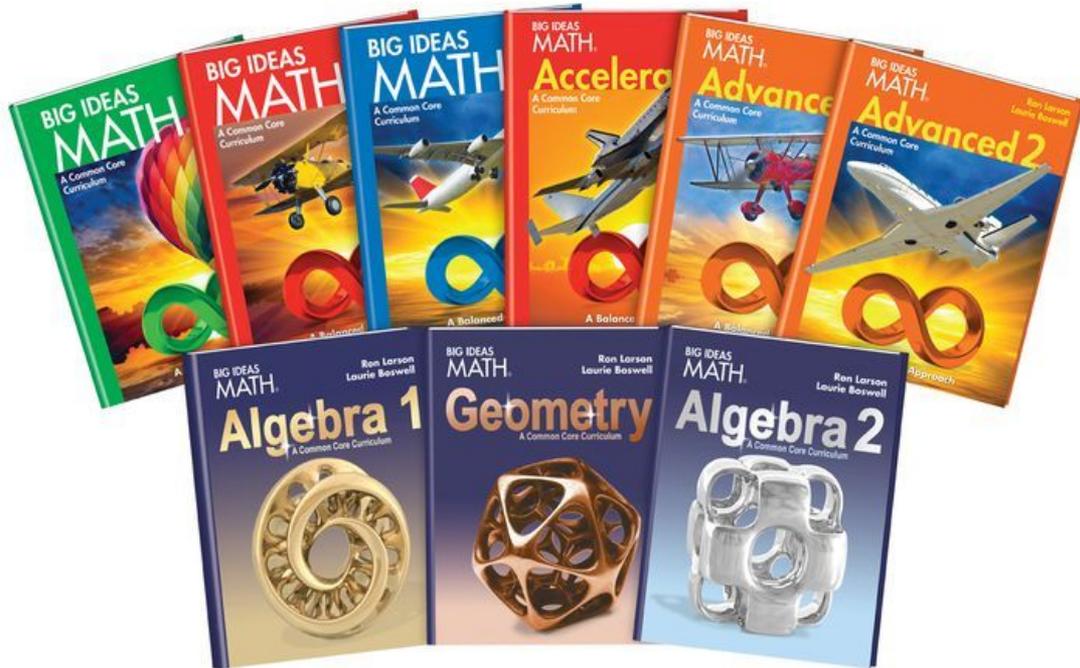


Big Ideas in the classroom- High School Geometry



Section 2

BIG IDEAS



Consultant

Mrs. Barbara Webber

Section 3

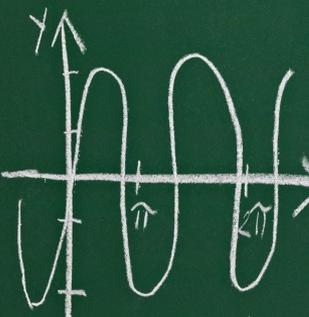
IMPLEMENTATION

$\frac{\sqrt{3}}{4} = (a^2)$  $a^2 + b^2 = c^2$

$\frac{1}{2} + B = 0 \Rightarrow \bar{B} = \frac{1}{2}$ $A = \frac{1}{2} AB \sin C = A^2 + B^2 + C^2$

$\hat{c}^2 = \hat{a}^2 + \hat{b}^2 - 2ab \cos(C)$

$27/32 = 0.8454 \uparrow$

 $\sqrt{1-x} \frac{1}{x} + \frac{1}{2y} \sum_n$ 

$y = \frac{1}{4}x - \frac{1}{8} \left(\frac{1}{xy} \right) + x^2 = 10$

$\hat{\pi} = 3.14$ 

$z = \frac{1}{\sqrt{2}} \hat{\pi} e$ $b^2 = \cos^2 C - 2ab \cos C$

$c = a^2 + c^2 - 2acc \cos C$

$A = \hat{\pi} r^2 \frac{10}{25}$ 

5 days of PD

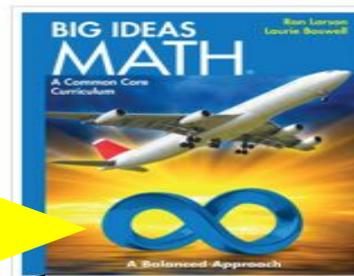
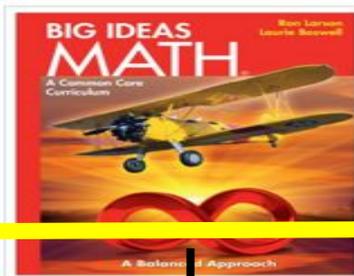
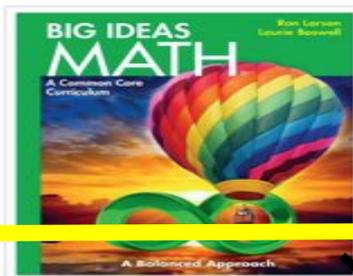
Pacing Guides

Grades 6, 7, 8

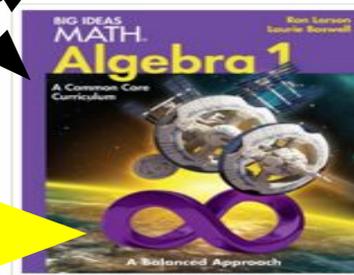
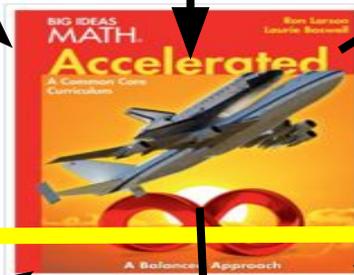
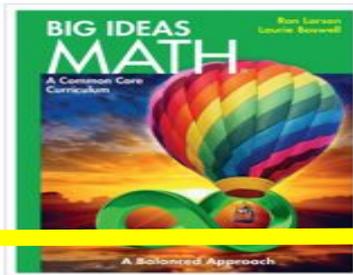
Phase 1: The Current School Year

Multiple Pathways to Algebra 1

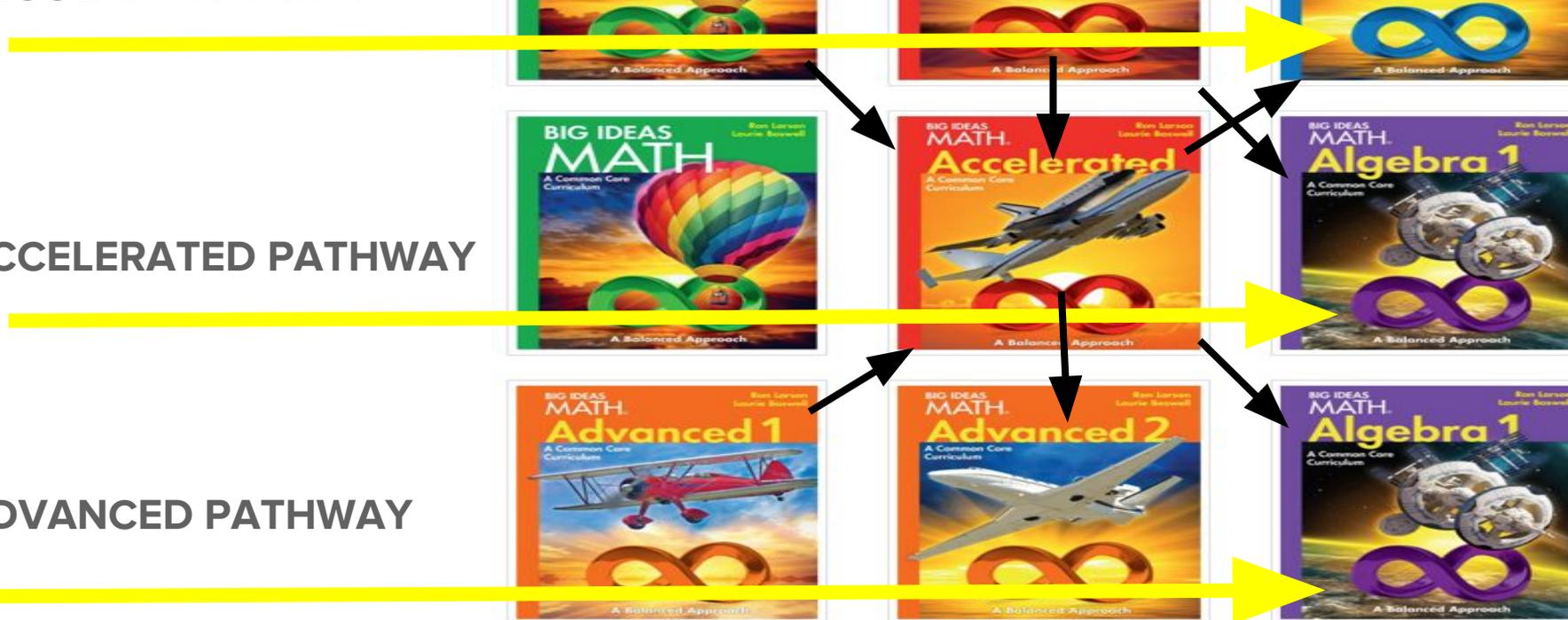
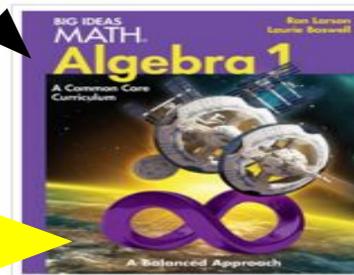
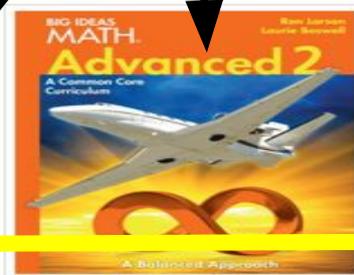
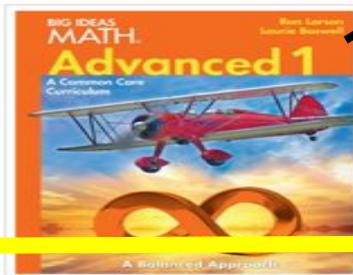
REGULAR PATHWAY



ACCELERATED PATHWAY

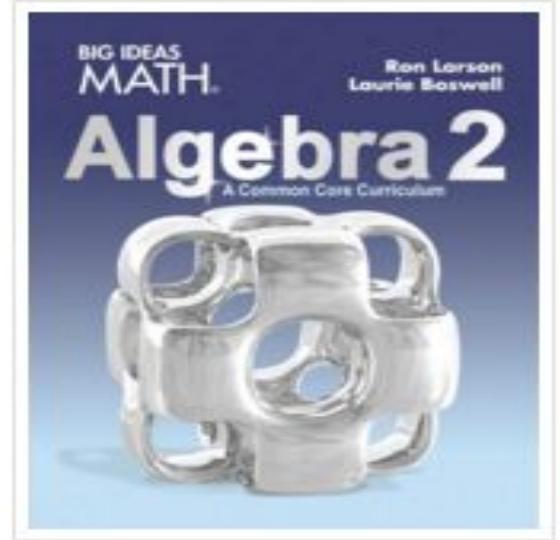
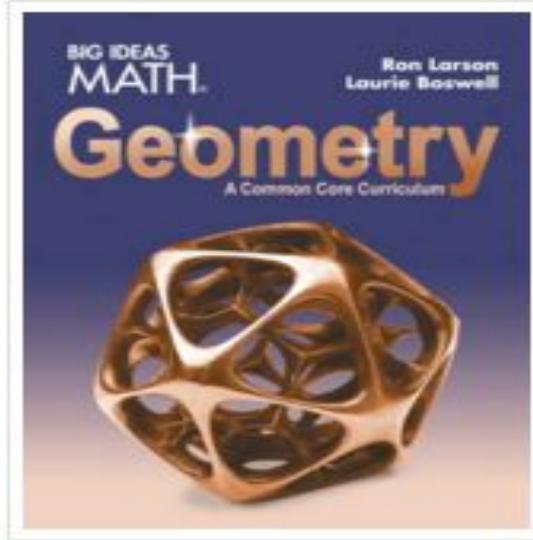
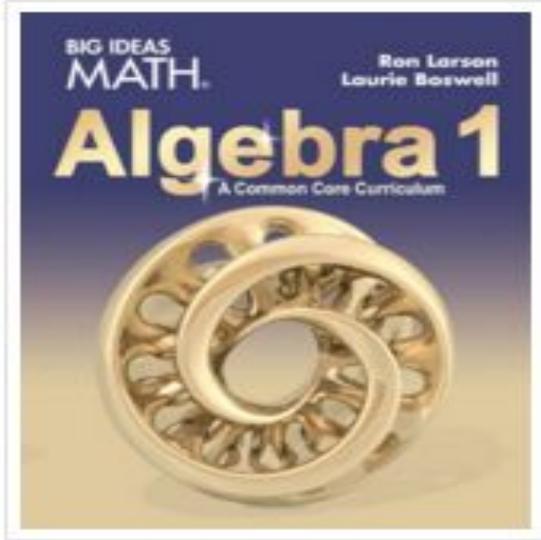


ADVANCED PATHWAY

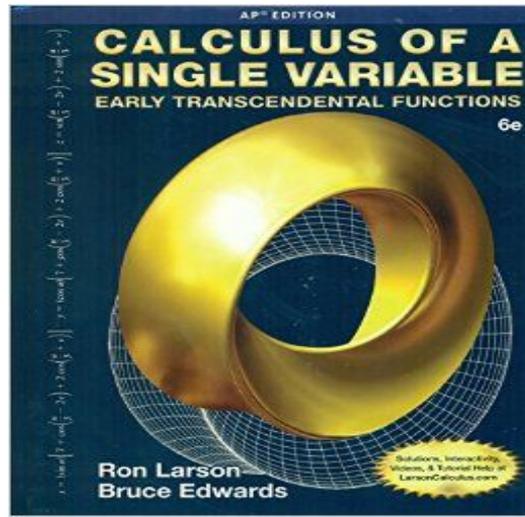


10 days of PD
Grades 9-12
+ Calculus Texts

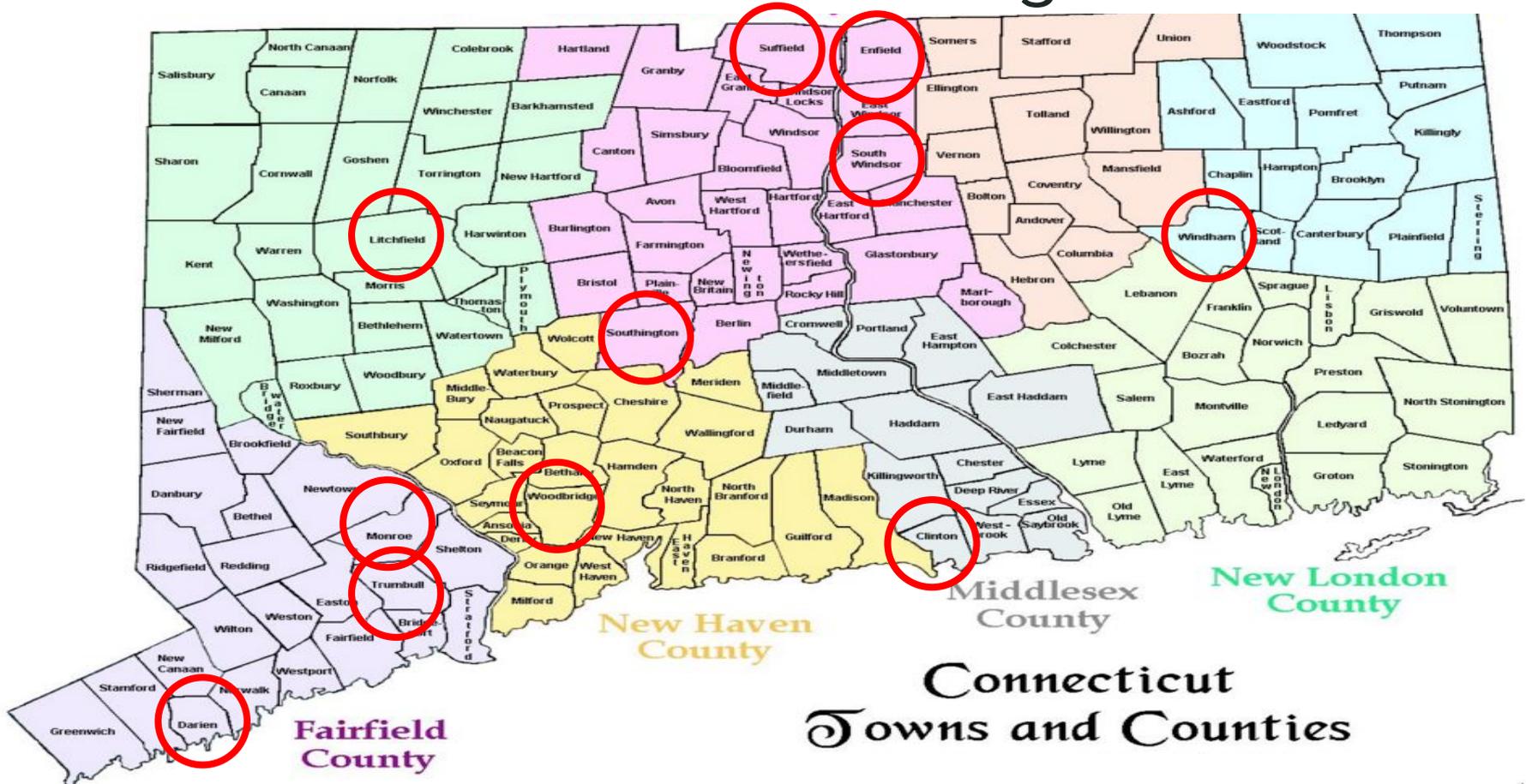
Phase 2: Next Year (2016-2017)



Grades 9-12
includes



School Districts with Big Ideas



Section 4

Teacher Training,
Fidelity, and Student
Assessment



Fidelity of Implementation



Implementation Components

1. **Program** - All appropriate elements and resources of the program are purchased, including leveled texts for each pathway.
2. **Teacher Training** - Significant professional development opportunities are provided for teachers to ensure that all teachers fully understand important program elements.
3. **Pacing Guides** - Pacing guides are developed to ensure that appropriate coverage of the material is achieved by all teachers.
4. **Walkthroughs** - Administrators and coaches conduct walkthroughs to ensure that program elements are being implemented effectively.
5. **Coaching** - Administrators and coaches will provide teachers with regular feedback to provide an opportunity for continuous improvement.
6. **Student Achievement** - Benchmark assessments will be created for all courses to ensure students respond positively to the new program.

Professional Development Opportunities

1. **Initial Program Overview-** instructional components, organization & technology
2. **Increasing Depth of Knowledge-** lesson planning and targeted instruction
3. **Questioning in the Classroom-** Questioning that facilitates critical thinking and sharpens class discussion (Tool: Bloom's Taxonomy)
4. **Increasing Rigor-** Increasing student engagement through inquiry, investigations, and experimentation. (Tool: Hess Cognitive Rigor Matrix)
5. **Assessment-** Development of formative and summative assessments to measure and inform student learning
6. **Promote Active Learning-** Strategies to implement the Mathematical Practices Standards and students' habits of mind to improve achievement
7. **Meeting students' needs through Differentiation-** Evidence based instructional strategies to help teachers identify and support students with different profiles
8. **Ongoing Coaching**

Curriculum Development

- **Increases program fidelity**
- **Vertical alignment K-12**
- **Formative and benchmark assessment**
- **High quality standards**