Grades 6 & 7 Textbooks Professional Development

Session 1: January 6 and 7, 2015

Session 2: January 8 and 9, 2015

PD Norms

- Be present
  - Silence cell phones
- Value each other's input
- Focus on what the data tells us
- Ask the hard questions
- Think outside of the box
- What is learned here leaves here
- Listen to understand
- Be open to sharing and collaborating
- Start on time, end on time

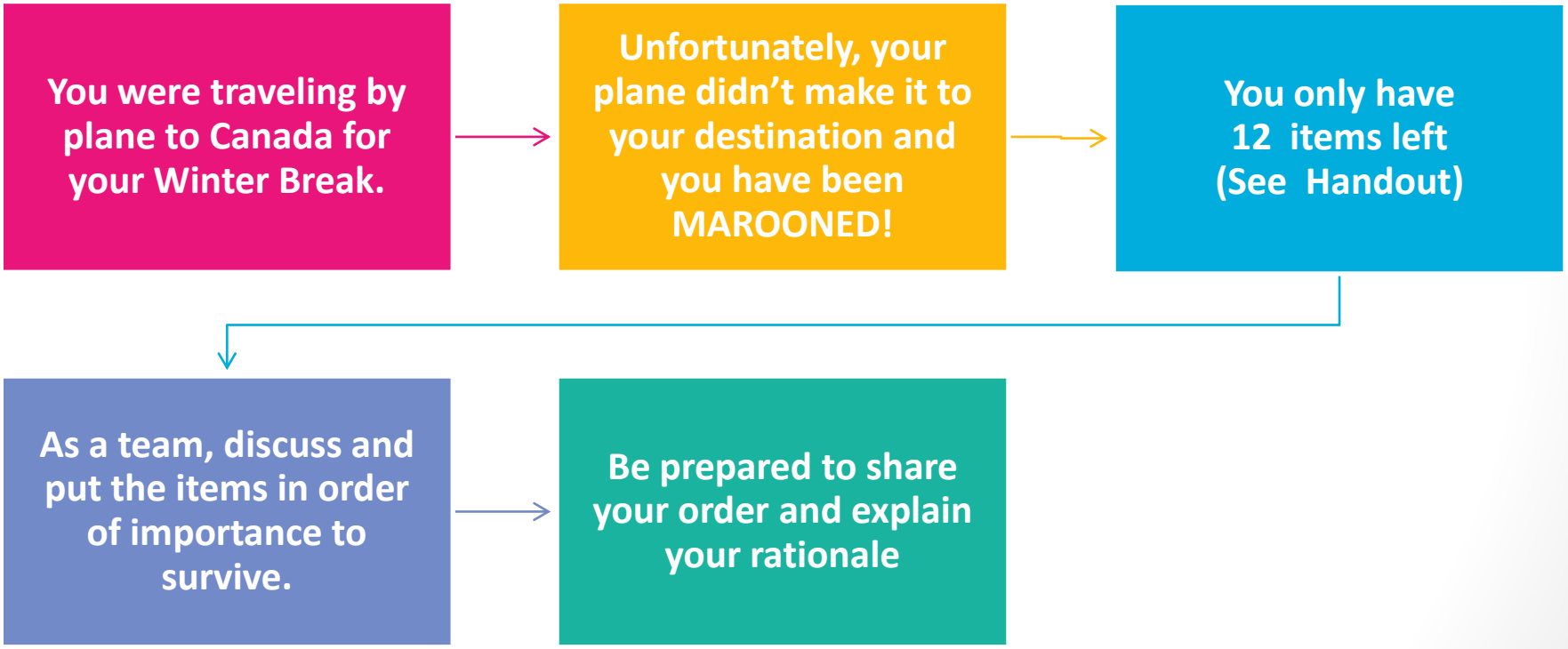
Outcomes

- Connect the curriculum map and identify the gaps in rigor in the textbook with the CCSS
- Engage in backward planning to deepen students' mathematical knowledge
- Plan differentiated supports for EL, SWD, GATE, and SEL
- Engage in CCSS mathematical tasks

Agenda

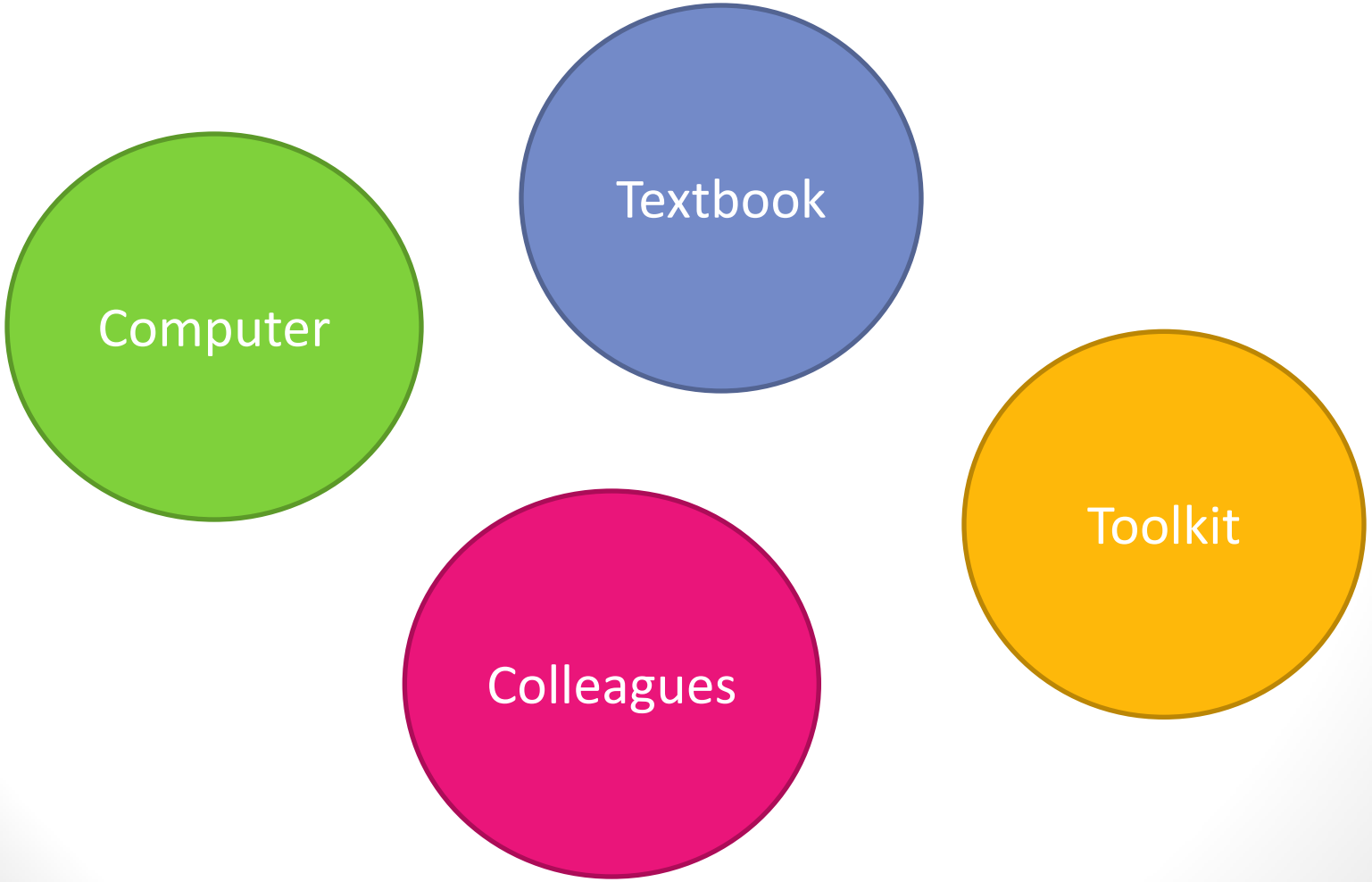
- Backward Design
- Exploring the Curriculum
- Unit Planning utilizing Textbook Resources

Survival Task



Now…

- This is what you have to survive a Common Core Classroom!



Section One

BACKWARD DESIGN

"As we move to the second decade of the twenty-first century, one thing is clear: Our country needs highly trained workers who can wrestle with complex problems. Gone are the days when basic skills could be counted on to yield high-paying jobs and an acceptable standard of living. Especially needed are individuals who can think, reason, and engage effectively in quantitative problem solving"

Margaret Smith, 2009

21st Century Skills

Stages of Backward Design

SBAC Claims for Assessment (based on the CCSS)

Blueprint Table Mathematics Grades 6–8 Estimated Total Testing Time: 3:30 (with Classroom Activity)[1]						
Claim/Score Reporting Category	Content Category[2]	Stimuli		Items		Total Items by Claim[3]
		CAT	PT	CAT[4]	PT	
1. Concepts and Procedures	Priority Cluster	0	0	14–15	0	14–15
	Supporting Cluster	0	0	5	0	5
2. Problem Solving 4. Modeling and Data Analysis[5]	Problem Solving	0	1	5	4	9
	Modeling and Data Analysis	0				
3. Communicating Reasoning	Communicating Reasoning	0		6	2	8

SBAC Claims for the Summative Assessment

Claim 1 - Concepts & Procedures

"Students can explain and apply mathematical concepts and interpret and carry out mathematical procedures with precision and fluency."

(Targets broken down by grade level content clusters)

Claim 2 – Problem Solving

"Students can solve a range of well posed problems in pure and applied mathematics, making productive use of knowledge and problem solving strategies."

(Targets aligned with practice standards MP1, MP5, MP7, and MP8)

Claim 3 – Communicating Reasoning

"Students can clearly and precisely construct viable arguments to support their own reasoning and critique the reasoning of others."

(Targets aligned to practice standards MP3 & MP6)

Claim 4 – Modeling and Data Analysis

"Students can analyze complex, real world scenarios and can construct and use mathematical models to interpret and solve problems."

(Targets aligned to practice standards MP2, MP4 & MP5)

SBAC Sample Questions by Claim

Exploring the Claims

- Using the Handout provided, look at some SBAC Sample Question for the grade you teach by Claim.
- Note what Math Practice Standards are needed to support student success
- Compare and Contrast the different SBAC Claims

HANDOUT # 1

Matching Game

Step 1

- Using the problems provided, discuss as a school team and match them to the correct SBAC Claim.

Step 2

- Based on the identified Claim, discuss the appropriate Math Practices associated with that Claim.

Step 3

- Discuss how you would use the Math Practices to teach the standard associated with the problem.

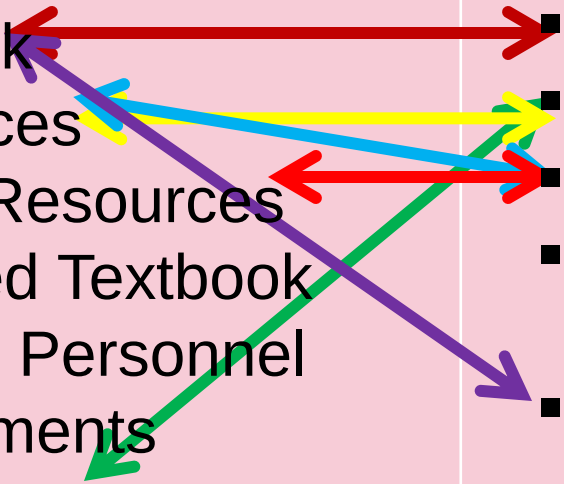
Section Two

EXPLORING THE CURRICULUM

Making Connections

Textbook Publisher
vs.
LAUSD

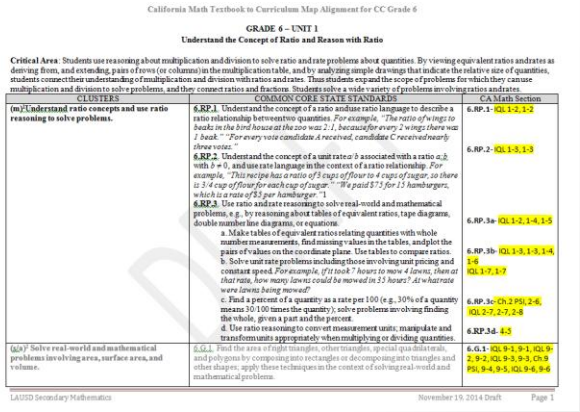
Textbook	LAUSD
▪ Textbook ▪ Resources ▪ Online Resources ▪ Assigned Textbook Support Personnel ▪ Assessments	▪ Curriculum ▪ Resources ▪ Online Resources ▪ Assigned CCSS Support Personnel ▪ Assessments



LAUSD Curriculum Maps

- Where is it located?
- What's new?
- How is it connected to the textbook?
- What order do I follow?
  - Curriculum map
  - Textbook

HANDOUT # 2



California Math Textbook to Curriculum Map Alignment for CC Grade 6

GRADE 6 – UNIT 1
Understand the Concept of Ratio and Reason with Ratio

Critical Area: Students use reasoning about multiplication and division to solve ratio and rate problems about quantities. By viewing equivalent ratios and rates as deriving from, and extending, pairs of rows (or columns) in the multiplication table, and by analyzing simple drawings that indicate the relative size of quantities, students connect their understanding of multiplication and division with ratios and rates. Thus students expand the scope of problems for which they can use multiplication and division to solve problems, and they connect ratios and fractions. Students solve a wide variety of problems involving ratios and rates.

CLUSTERS	COMMON CORE STATE STANDARDS	CA Math Section
(m)[1] Understand ratio concepts and use ratio reasoning to solve problems.	**6.RP.1** Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. *For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."* **6.RP.2** Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. *For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."* **6.RP.3** Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. a. Make tables of equivalent ratios relating quantities with whole number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. b. Solve unit rate problems including those involving unit pricing and constant speed. *For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?* c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.	**6.RP.1**- IQL 1-2, 1-2 **6.RP.2**- IQL 1-3, 1-3 **6.RP.3a**- IQL 1-2, 1-4, 1-5 **6.RP.3b**- IQL 1-3, 1-3, 1-4, 1-6 IQL 1-7, 1-7 **6.RP.3c**- Ch 2 PSI, 2-6, IQL 2-7, 2-7, 2-8 **6.RP.3d**- 4-5
(g/s)[2] Solve real-world and mathematical problems involving area, surface area, and volume.	6.G.1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.	**6.G.1**- IQL 9-1, 9-1, IQL 9-2, 9-2, IQL 9-3, 9-3, Ch 9 PSI, 9-4, 9-5, IQL 9-6, 9-6

Why use multiple resources?

A textbook is a resource <u>not</u> the source. The standards are the source. Therefore, you can use many resources to build your curriculum that addresses the standards.

LAUSD Curriculum Map

Online Resources

Teacher Toolkit

Textbook

And more!

LAUSD Resources

Supporting the Curriculum

Why use the LAUSD Resources?

1) Concept Lessons
2) Performance Tasks
3) Inquiry & Investigation
4) Sample Problems
5) Best for Students

1) Planning & prep time to utilize the resources
2) May have to swap for textbook resources

The Pros outweigh the Cons

LAUSD Curriculum Maps

Using your computer, obtain the curriculum map for your grade

Step 1: achieve.lausd.net/math

Step 2: Click on Middle School

Step 3: Click on Curriculum Maps

Step 4: Click on Curriculum Maps for your grade

Step 5: Click on the Grade Curriculum Map Icon that you teach

Let's Explore

Scavenger Hunt Activity

Visit achieve.lausd.net/math

Explore the Curriculum Maps and the Resources Provided.

HANDOUT # 3

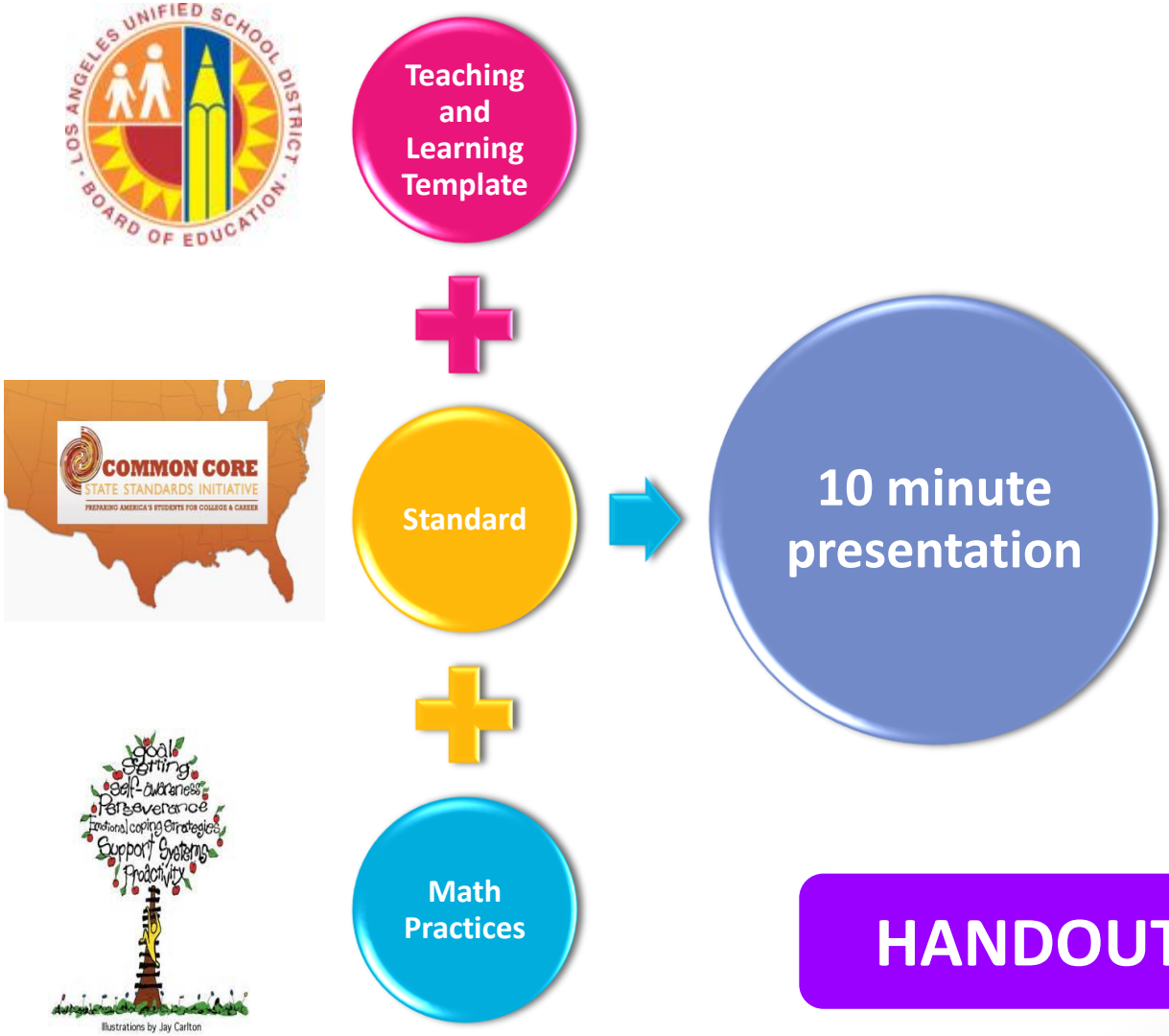
Section Three

UNIT PLANNING

Time to Perform

Moving from Theory to Practice

Putting it into Practice Microteaching Assignment



Setting the Stage

- Choose one of the Cluster(s) provided
- Activity based *(Students need to be engaged)*
- Differentiated (*Specific to EL and SWD students)*
- Must include at least one online resource from the publisher
- Work with your school teams

The Review

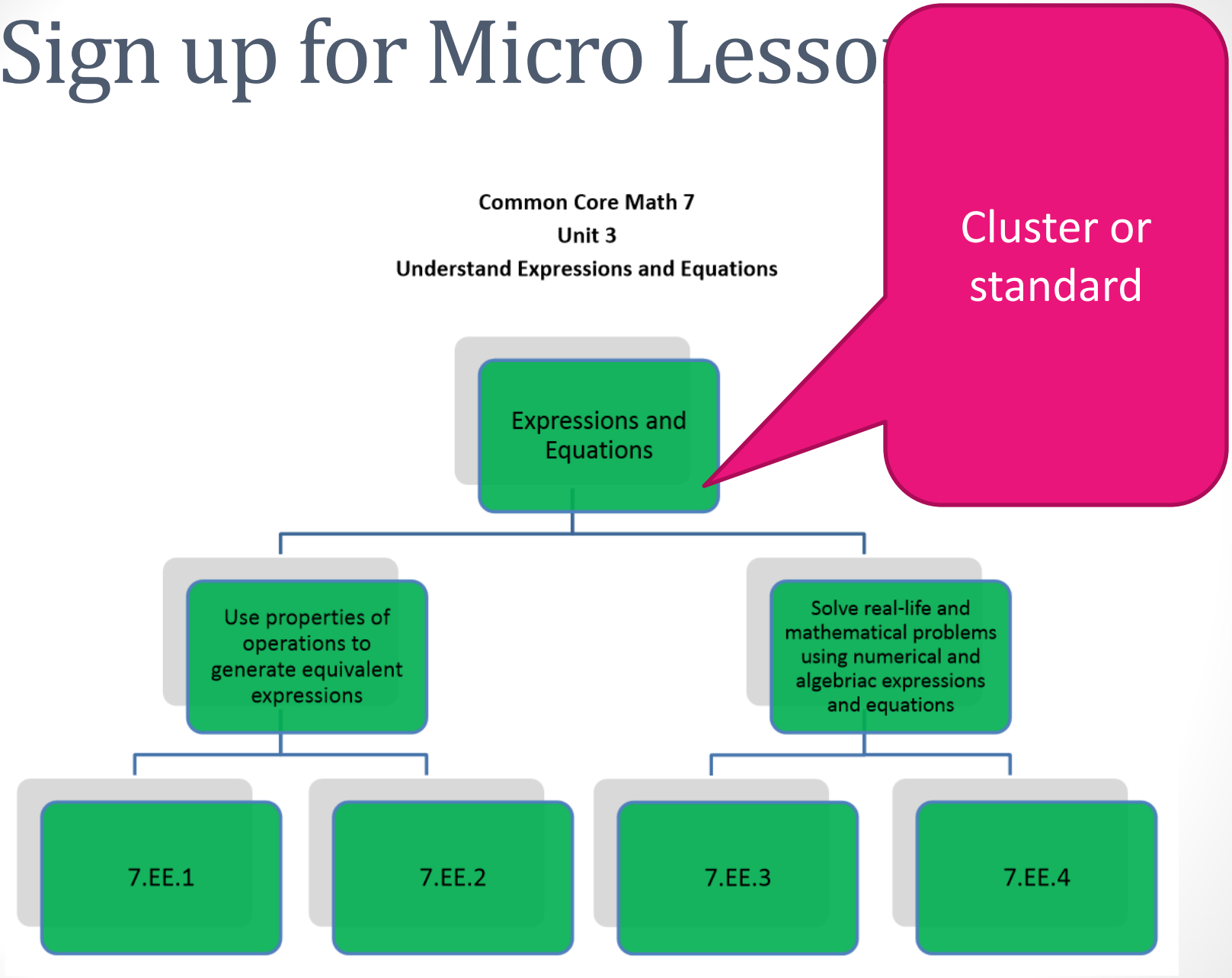
Active Listening & Feedback

Each Audience Member will be given an Index Card to write down their review

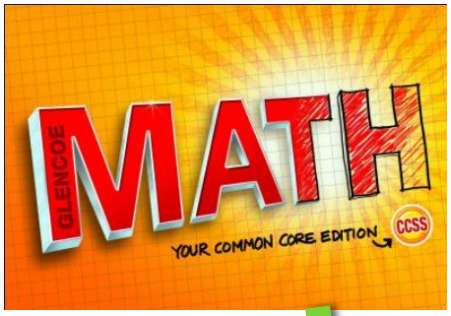
Write down one thing from the Micro Lesson you liked

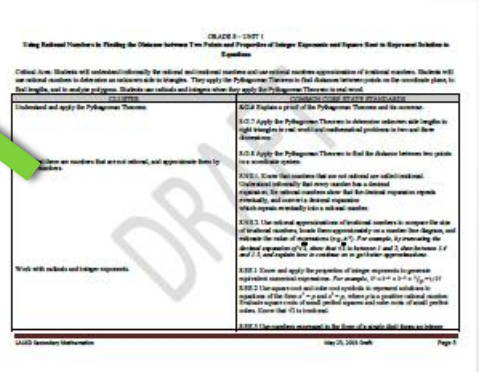
Write down one thing from the Micro Lesson you wish you would have seen

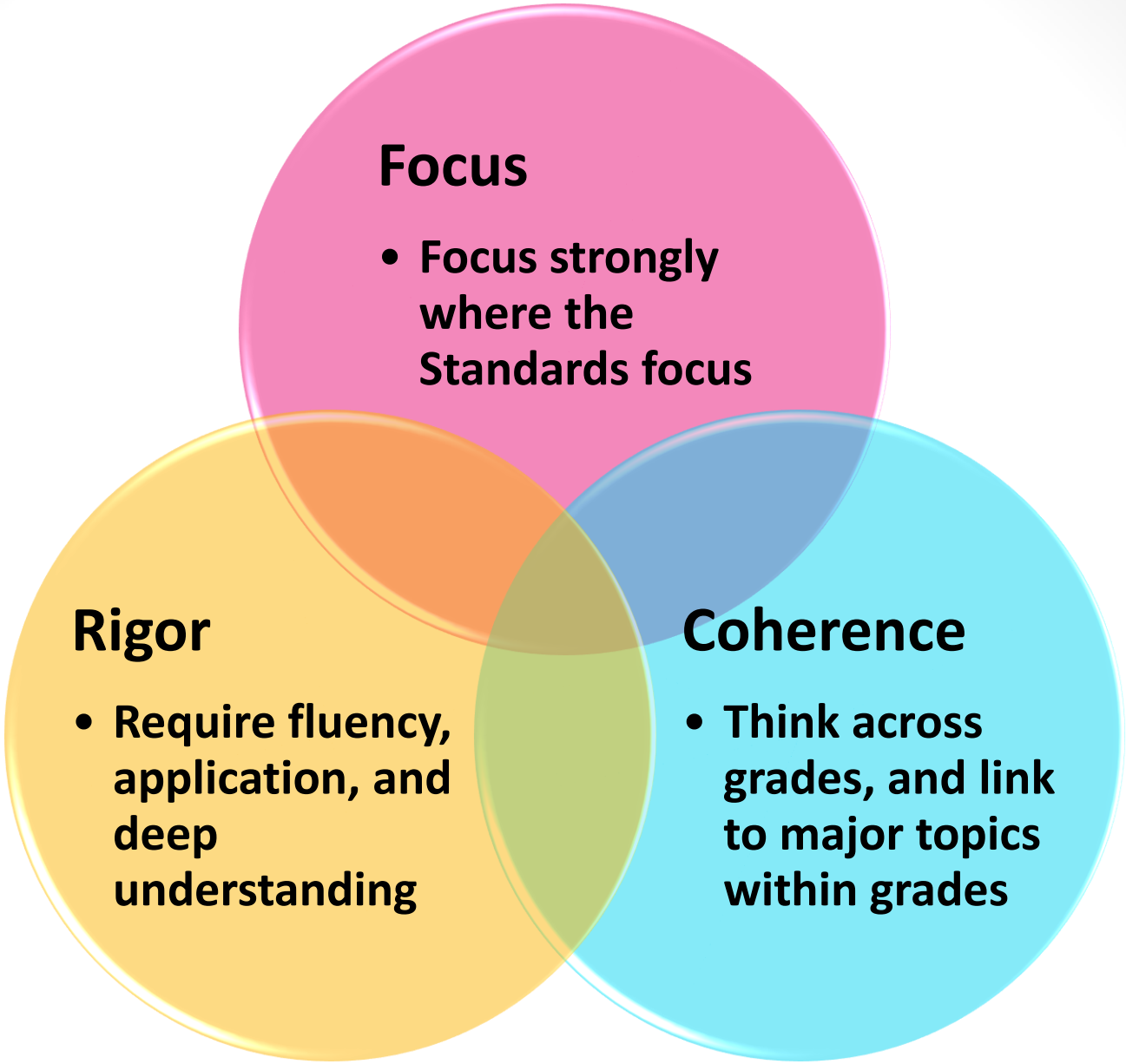
Sign up for Micro Lesso



What do you need to create an Effective Calendar?







Balanced Curriculum

Let's Plan

PD Evaluation