

# Improving Student Learning Through Teachers' Collegial And Collaborative Learning

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#### Goals for the session

- Acknowledge your importance and role in the quest for student learning and achievement
- Deepen understanding of collaborative and collegial learning for teachers
- Engage in a learning experience grounded in the work of teaching and learning
- Learn about online avenues for collaborative and collegial learning



... "the single most important factor in determining a child's achievement is not the color of their skin or where they come from; it's not who their parents are or how much money they have. **It's who their teacher is**..."

#### Senator Barack Obama

Remarks to the 80th Convention of the American Federation of Teachers



# The Sum of the Parts is Greater than Some of the Parts: Lessons from Geese

... "A single individual can make a significant difference with a student or group of students. But in order to fundamentally change the system for the benefit of all students, including those in school today and those who will follow in years to come, that individual needs to join forces with others..."

Cathy Seeley, Faster Isn't Smarter



#### Effective Mathematics Teachers . . .

Reference for this material:

Sensible Mathematics: 10 Instructional Shifts That Raise Student Achievement, by Steve Leinwand, pp.90-95. Heinemann, 2009.



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# What does 'teacher collaboration' mean?

Talk with the person to your right about these questions:

- How do you define collaboration?
- What makes collaboration productive?
- What hinders collaboration?



#### What does 'collaboration' mean?

Collaboration is a <u>recursive</u> process where two or more <u>people</u> or <u>organizations</u> work together in an intersection of <u>common goals</u> — for example, an intellectual endeavor that is creative in nature—by <u>sharing</u> knowledge, learning, and building consensus.

Wikipedia



# Essential Elements for Effective Teacher Collaboration

- Knowledge of content and process standards
- Common perspective on effective teaching and learning
- Plan/protocol for collaboration
- Supportive leadership



# Conditions for Effective Teacher Collaboration

- Respect for each other's ideas
- Commitment to share information and experiences
- Willingness to take the risk to go public with teaching strategies
- Focus on improved student learning
- Commitment to patience and persistence



## Norms of Support and Trust

- Suspend certainty
- Reserve judgment
- Leave room for differences
- Actively listen to self, others, and the group
- Assume positive intention

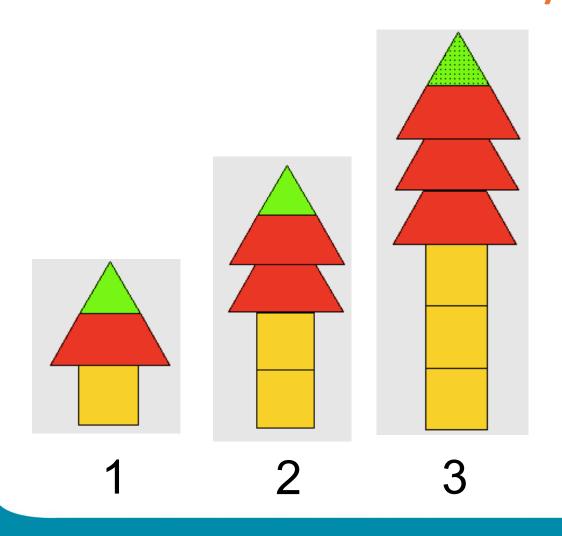


# Some Contexts for Collaboration and Learning

- Content Standards
- Common assessments and assignments
- Student assessment data
- Lesson observations
- Student work
- Lesson planning
- Book study or lesson study
- Common vision for teaching and learning
- Implementation of new teaching practices



# What will this tree look like on its 5<sup>th</sup> birthday?



What would the tree look like on its 5<sup>th</sup> birthday? How many of each block would you need?

On its 10<sup>th</sup> birthday?



#### **Observation Questions**

As you watch the lesson, look for examples of the use of:

- context and connections
- multiple representations
- problem solving, reasoning, and sense-making

What evidences of student learning do you see and hear from students?

How is your approach to teaching this content similar and different?



#### Lesson Video

• Link to video:

http://www.mathsolutions.com/index.cfm? page=wp8&crid=386



### **Observation Questions**

As you watch the lesson, look for examples of the teacher's use of:

- context and connections
- multiple representations
- problem solving, reasoning, and sense-making

What evidences of learning do you see and hear from students?

How is your approach to teaching this content similar and different from what you observed?

## **Debriefing Questions**

 What questions /thoughts would you have for Nickie about this lesson?

 How could experiences like this help strengthen instruction?



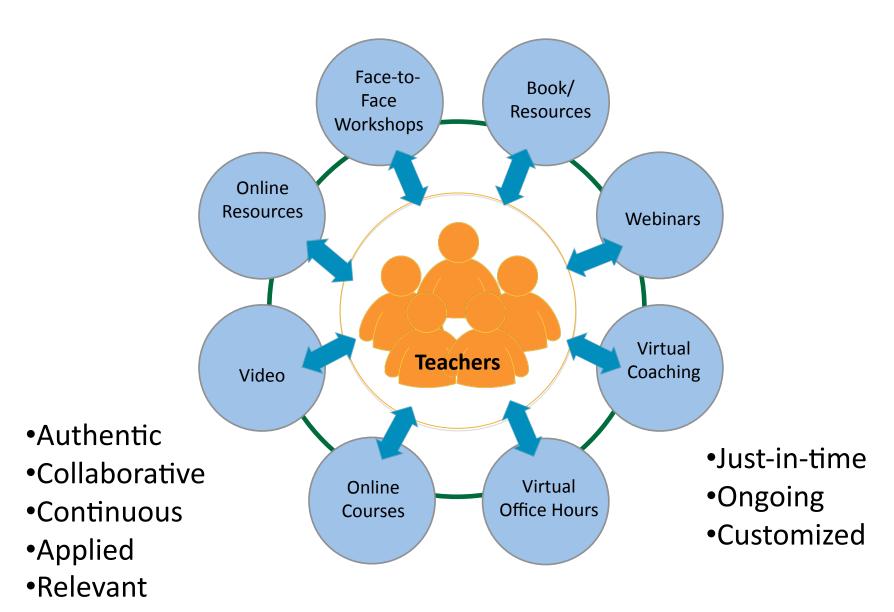
#### Technology Is Only a Tool

We are innovating the wrong thing. Our instructional practices are what need changing, not the technology. ...Technology should be able to enrich our ability to individualize, extend, and support instructional experiences and connections in ways that would not be possible otherwise. That is innovation..."

-- Don Hall, CIO, Muscogee County School District ISTE magazine



#### **Models for Collaborative Professional Development**



# Virtual Coaching

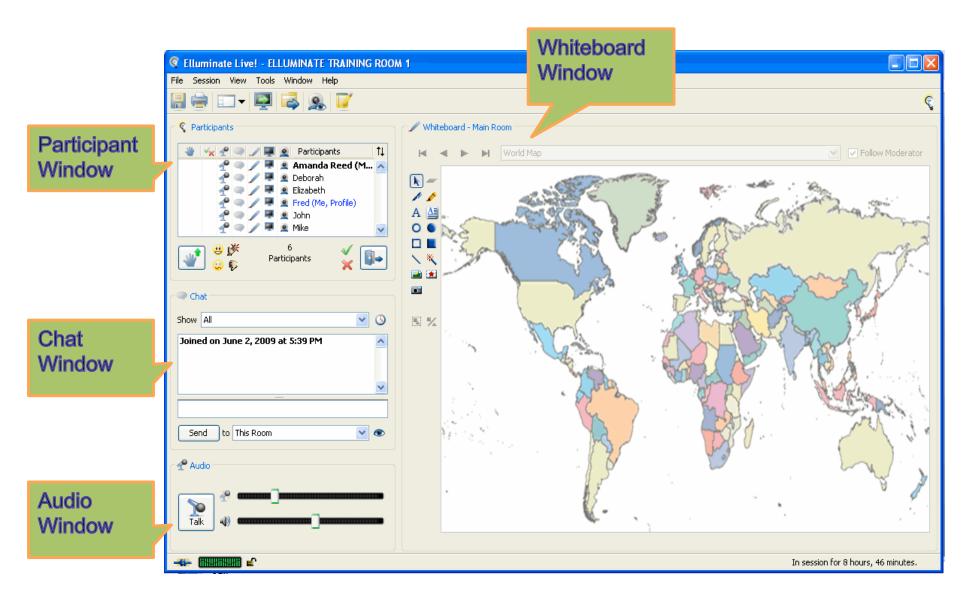
- Can be effective as follow-up to face to face workshops or as a standalone
- Groups can be formed by district based on needs and schedules
- Delivered on available platforms (e.g., Elluminate, Wimba, Ilinc)

## Virtual Coaching-Sample Activities

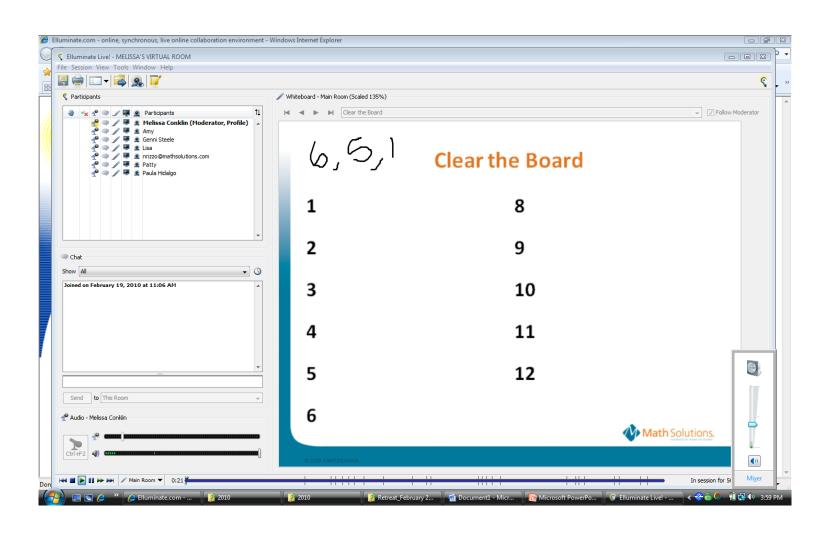
- Plan a lesson and share results
- Share videos of classes taught
- Analyze student work
- Plan formative assessment
- Plan transition activities
- Get advice from an experienced coach

### Let's take a look

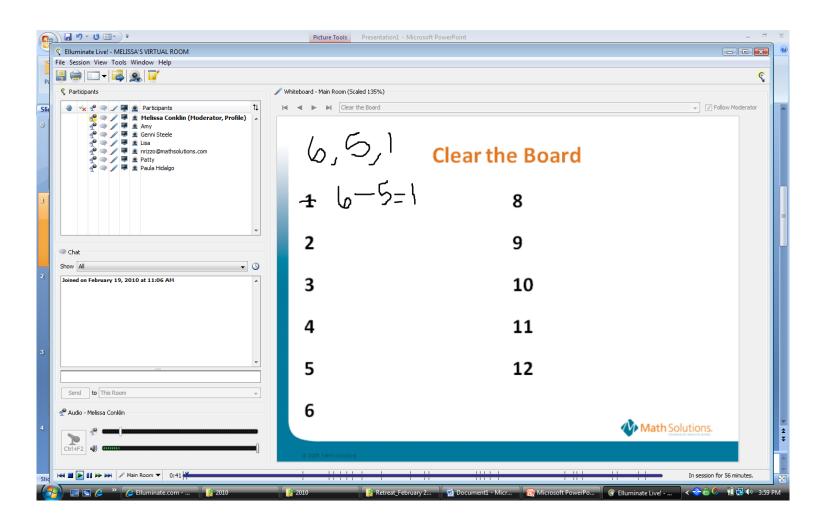
#### **The Participant Interface**



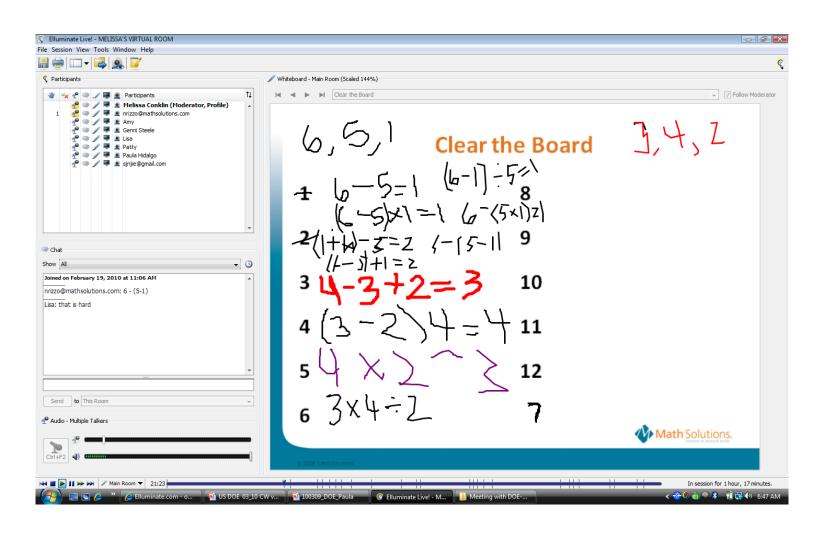
#### Session on Number Sense:



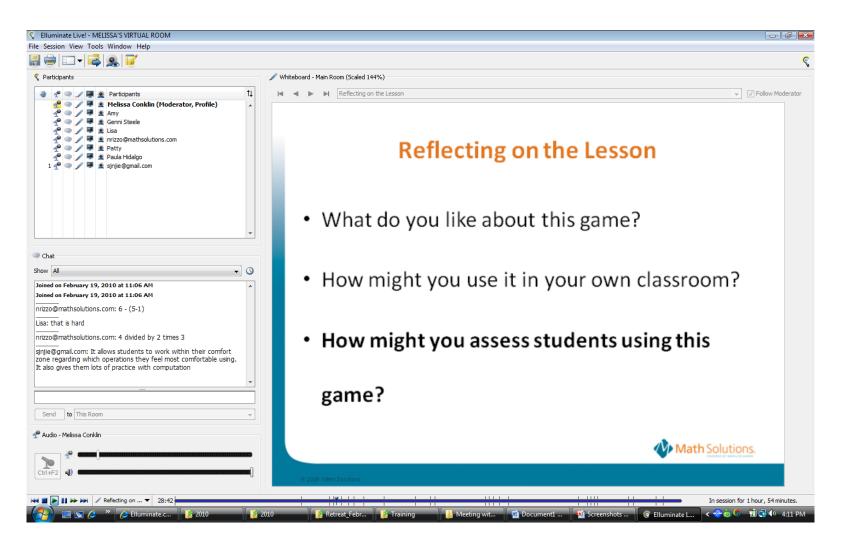
# Clearing the '1'



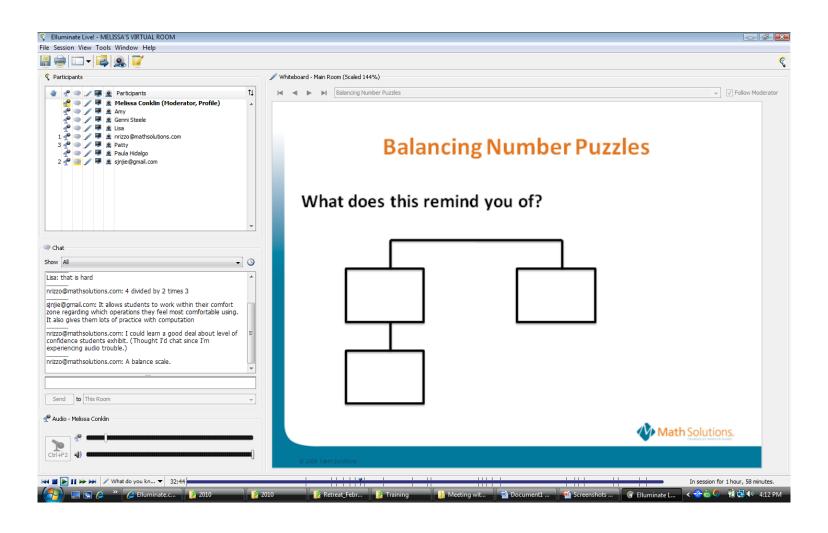
# Clearing the rest of the numbers



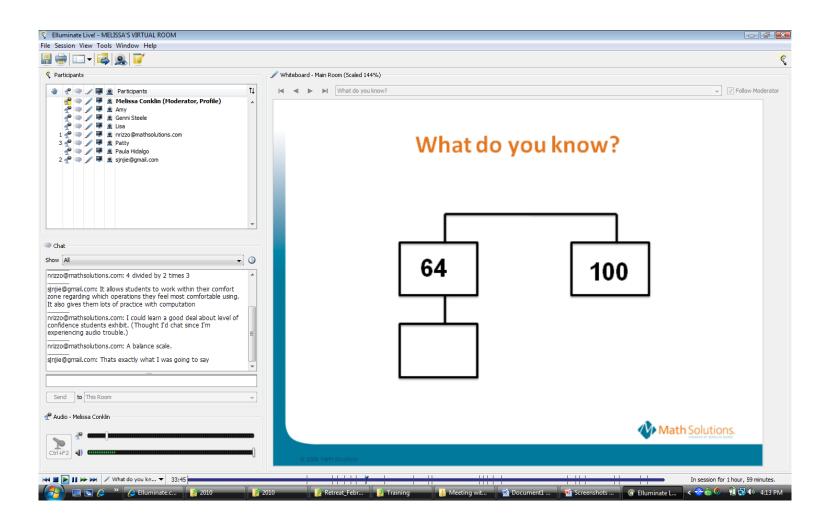
#### **Additional Reflections**



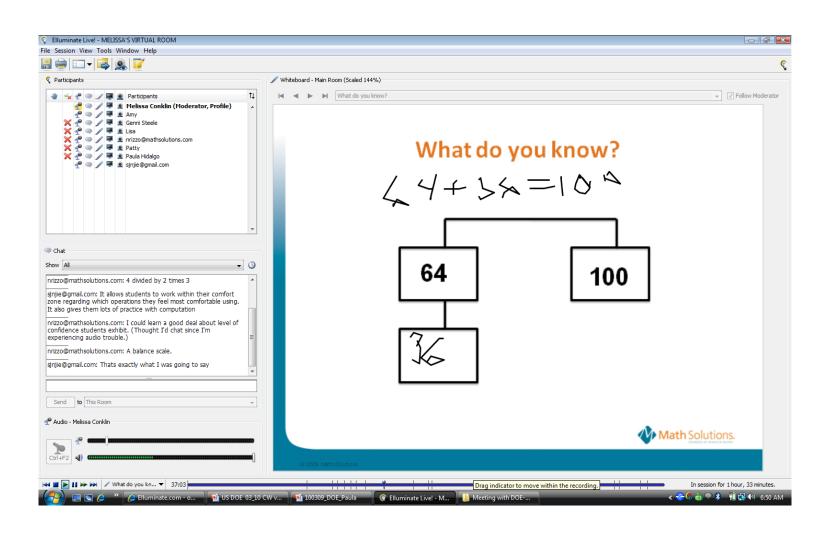
## **Balancing Number Puzzles**



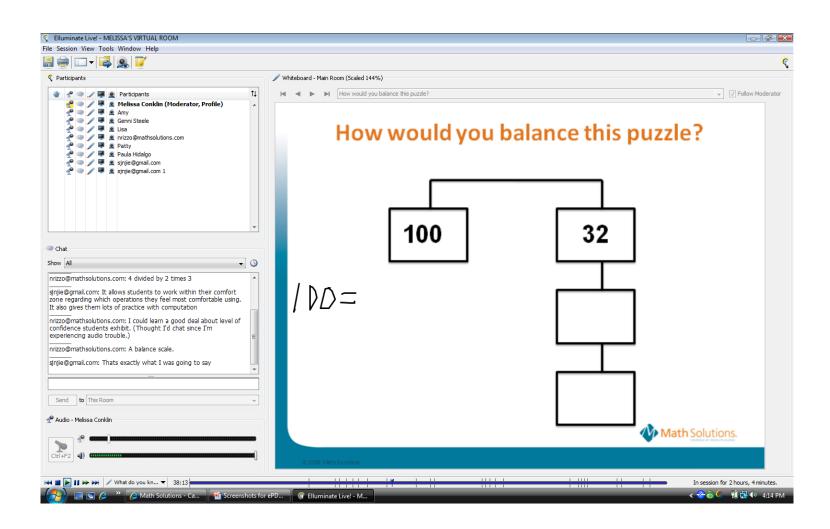
## First example



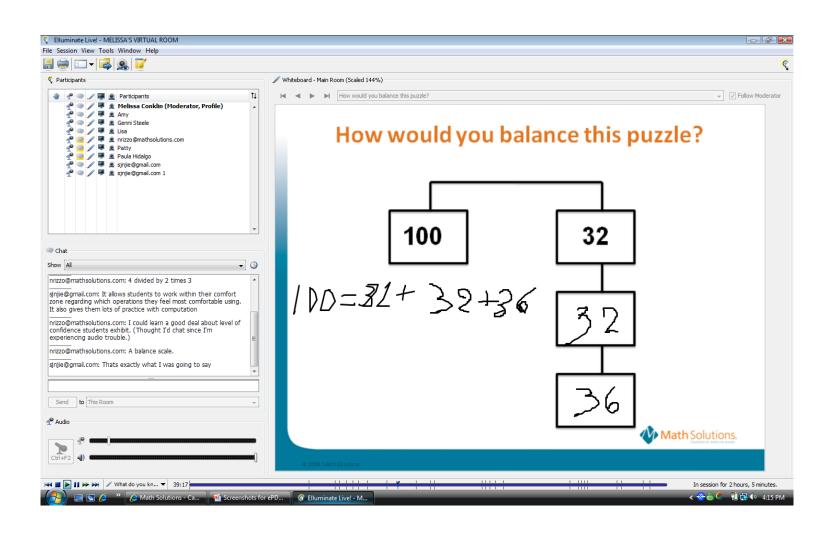
### Now with the equation



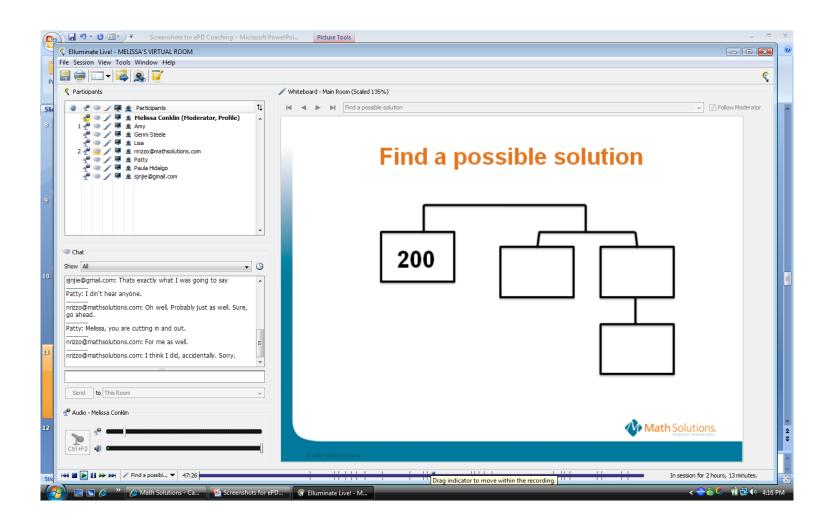
#### **Another Puzzle**



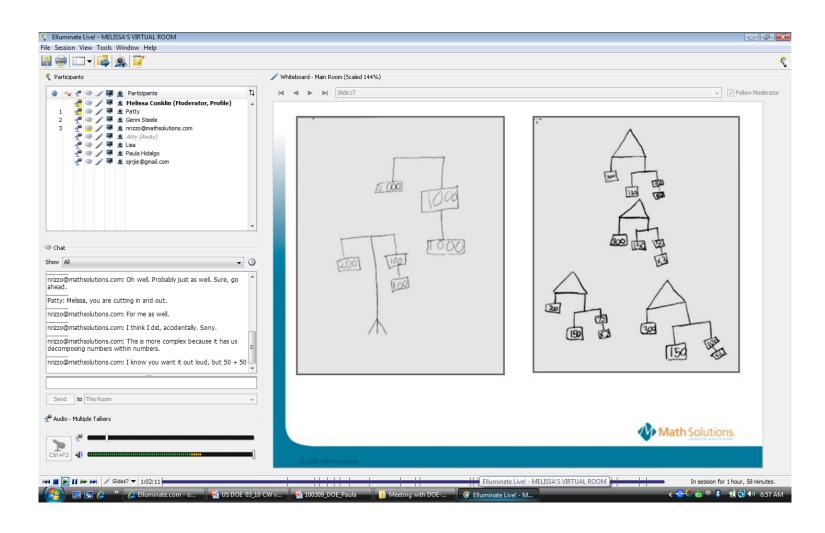
#### One Possible Solution



# Continuing the Exploration



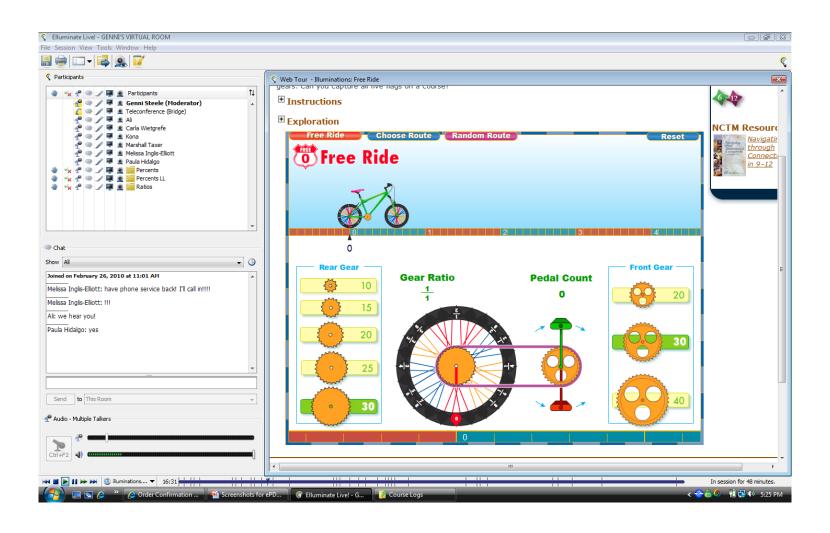
# **Analyzing Student Work**



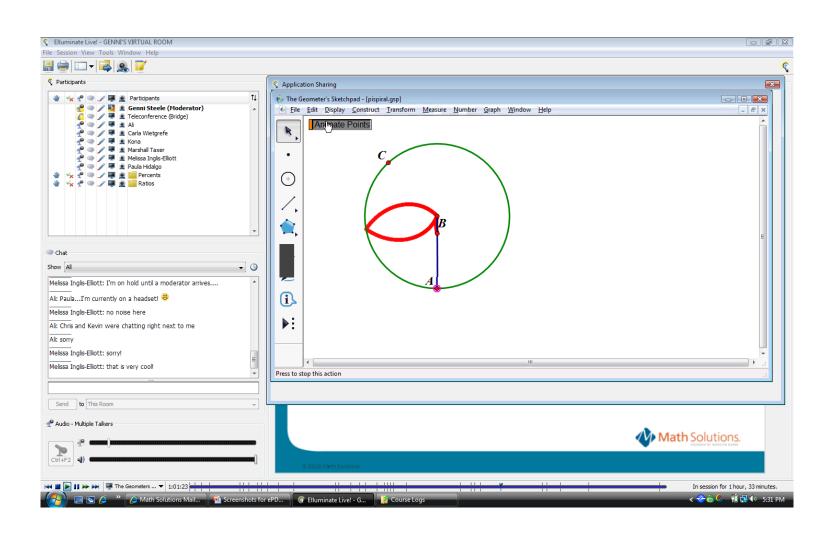
# Using Simulations/Digital Objects

- ePD Coaching allows us to do web tours and play with various simulations available online
- Math Solutions has permission to use digital objects from several companies (e.g., ETA Cuisinaire, Gizmos)
- Instructors choose the simulation/digital objects appropriate to the topic and objective of the session

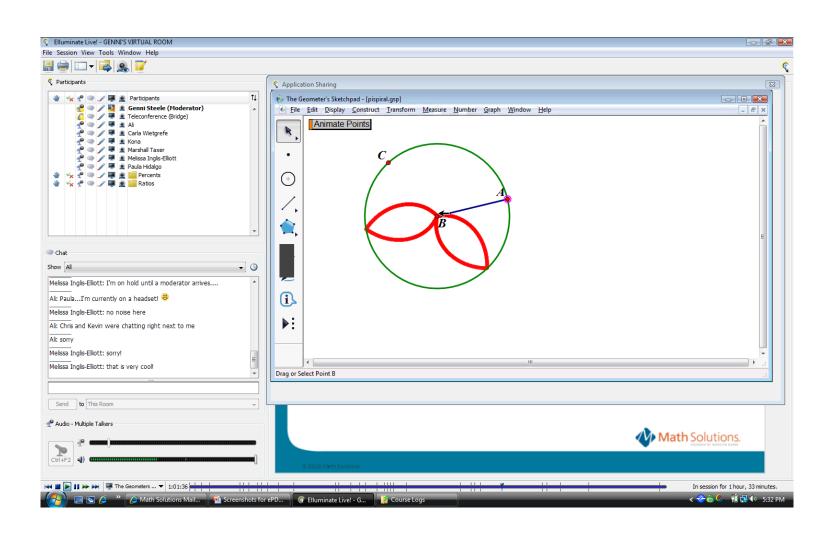
#### Simulation on Ratios



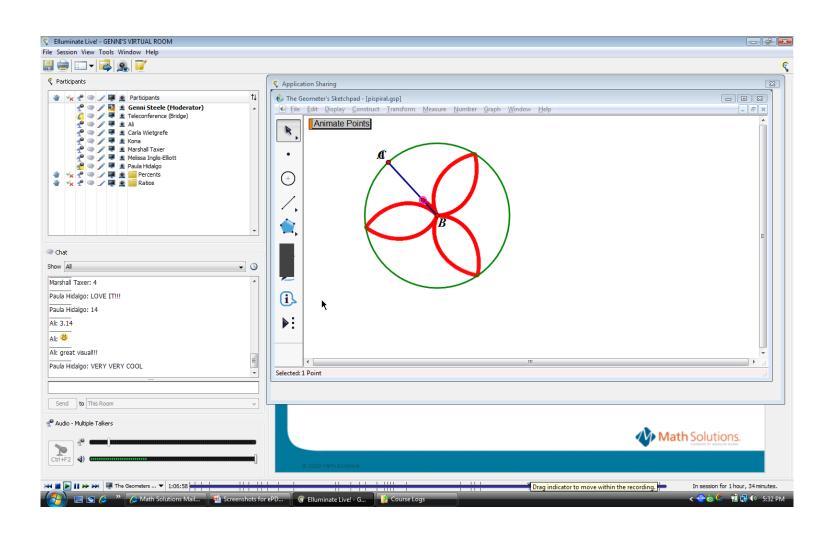
#### Simulation on Radius and Diameter



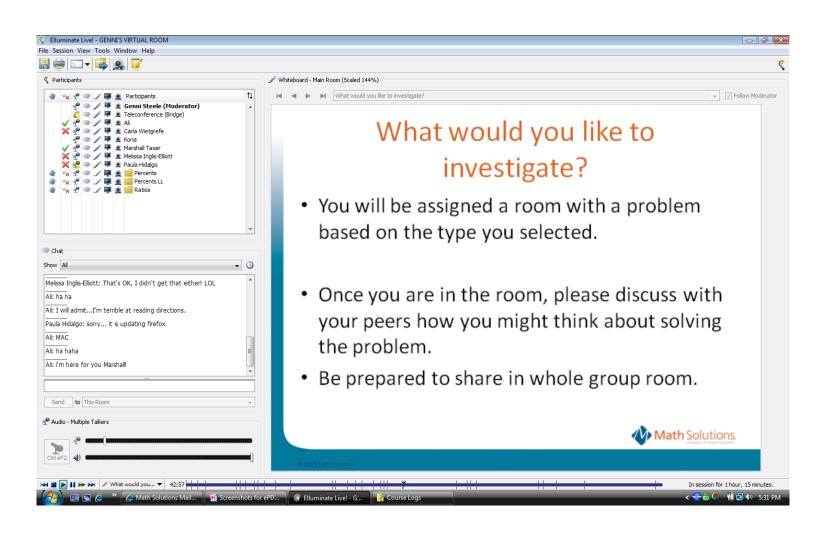
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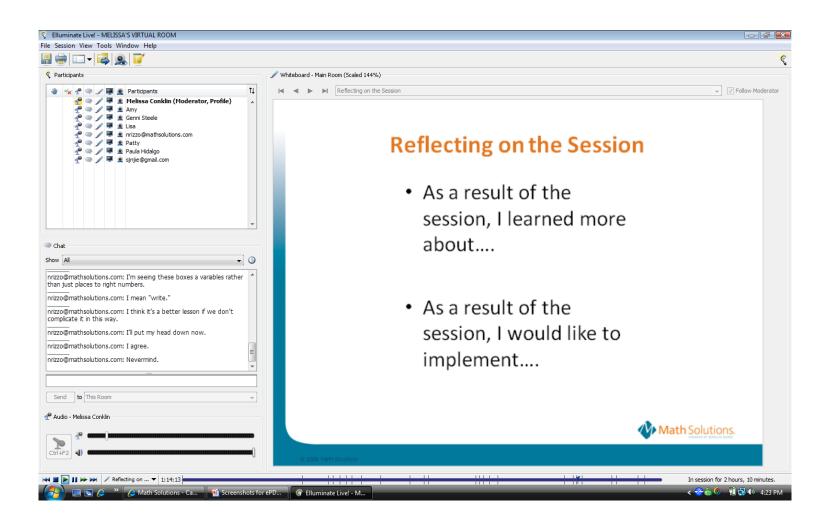
# Working in Small Groups



### Watching a Video

- The group discusses pre-watching questions
- The group as a whole watches selected segments
- Participants discuss videos in small groups
- Participants report back to the whole group and answer post-watching questions

#### Self Reflection



"If we want to grow in our practice, we have two primary places to go . . . to the inner ground from which good teaching comes and to the community of fellow teachers from whom we can learn more about ourselves and our craft . . .



The resources we need in order to grow as teachers are abundant within the community of colleagues. Good talk about good teaching is what we need—to enhance both our professional practice and the self-hood from which it comes.

Parker Palmer

Courage to Teach





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