

International Mathematics Education Conference

**Helping English Language Learners
Excel in Mathematics using Technology**

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Creating schools that work for all children



Our motto



- ELL students matter!



Broad Objectives



- Explore various technologies:
 - graphing,
 - data collection,
 - dynamic technologies, and
 - mindmapping tools
- Strategies for empowering English Language Learners

Math Smart!

SIOP Components



- A framework for lesson planning
- Key elements for ELLs
- Application to activities





Math Smart!



Demonstration using motion detectors and graphing calculators



Banking on Student Experiences

Part 1

- Reflect on your own experiences as a basis for examining functional relationships between distance, rate, and time.
- Make a graphic representation of each of the scenarios.
- Select a note-taker for the group. Share your answers to the three questions above.

Part 2

- Create a graph using the motion detectors and graphing calculators
- Trade your graph with another group
- Create a story that describes the relationships of distance, rate, and time that were visually presented
(What vocabulary would you want students to use?)



Banking on Student Experiences Engaging Students



- Well planned lessons
- Clear explanation of academic tasks
- Appropriate amount of time spent on academic task
- Strong classroom management skills
- Creating meaningful math activities



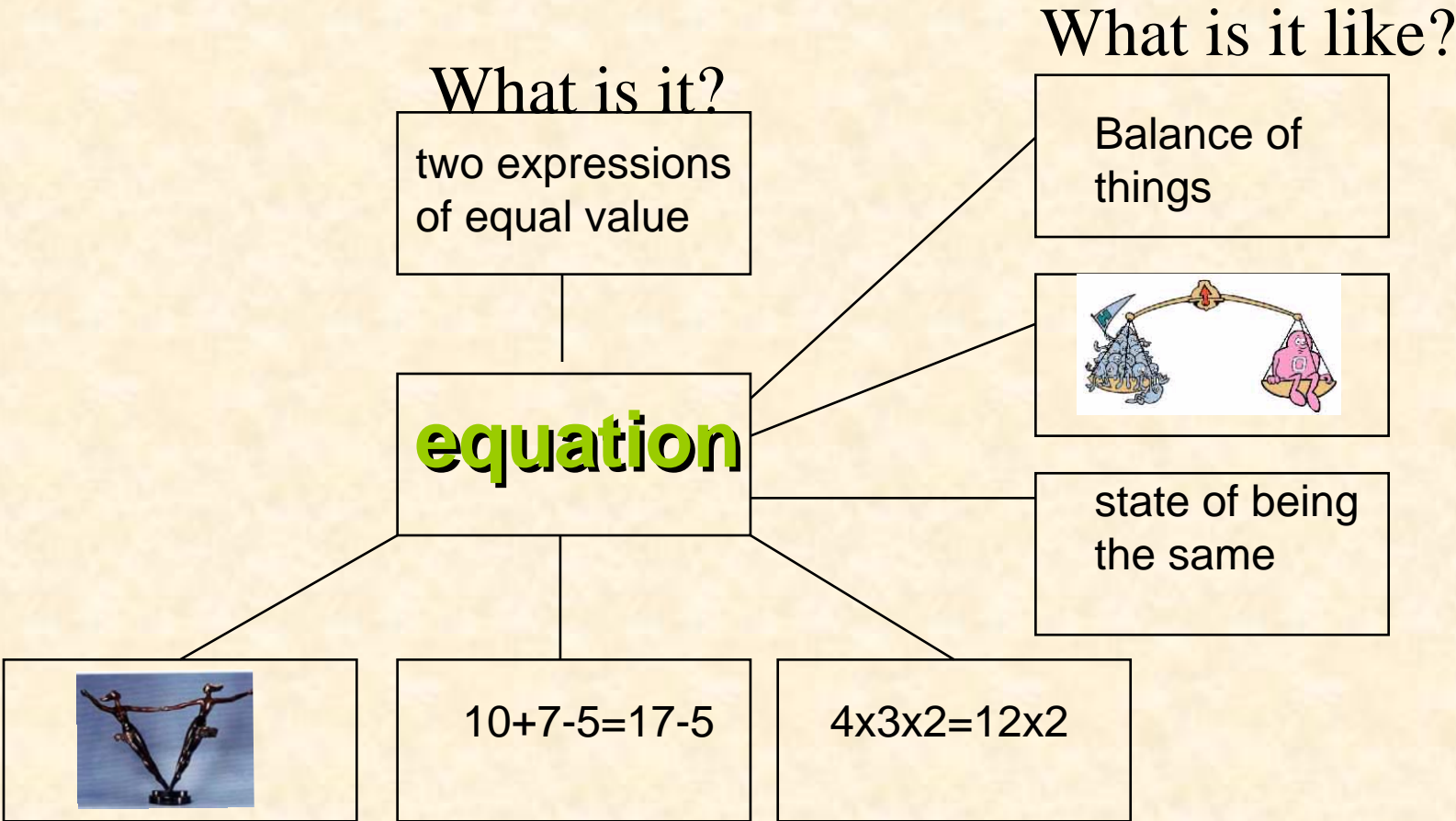
Dynamic Learning



- Continuity in parameter changes
- Linkages, dependencies, causality, and implication
- Build working, manipulable models
- Think and describe behaviors of mathematics
- Problem Posing and Generalization



Concept Map



What are some Examples?

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Concept Maps



- Building Conceptual Understanding using Inspiration
- Connect concepts
- Visualize mathematics
- Mindmapping techniques



Bringing it Together

- 5 Dimensions of Mathematical Proficiency
- Scaffolding for English Language Learners
- Student Experience
- Possibilities with Technology



Reflection

Some specific things I will learned:

What I will do:

What I need more information on:



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