



TODOS 2014

*Beyond Awareness: Equity, Access,
and Achievement for All*

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**Chandler, Arizona
June 26-28, 2014**

Equity EQUALS Respect



Presentation Agenda



- ✦ What is EQUALS?
- ✦ Equity or Equality
- ✦ Tea Party
- ✦ Cooperative Geometry
- ✦ Effects Wheel
- ✦ Closure:Alphabet Line-Up

What is EQUALS?



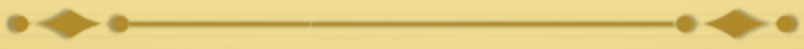
What is EQUALS?

- ✦ EQUALS is about addressing equity issues in the mathematics classroom.
- ✦ EQUALS was founded in 1977 to develop techniques for keeping young girls interested in mathematics. Over the years this focus expanded to include people of all colors, socio-economic classes, and diverse language backgrounds.

Characteristics of EQUALS?



- ✦ Interactive
- ✦ Less teacher talk and more student discourse and thinking
- ✦ Teacher plays a larger role as facilitator
- ✦ Equity at the core
- ✦ Ask “teachers” to reflect on their biases and expectations



Equity is about fairness,
equality is about sameness.

Nancy Kreinberg, EQUALS Founding Director

Tea Party



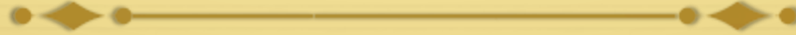
- ✦ Pair up with a partner, introduce yourself, and get ready to respond to the given prompts.
- ✦ Each partner will have 1 minute to address the prompt. The other person's responsibility is to listen.
- ✦ At the end of the minute, the roles are reversed.
- ✦ After the second speaker has had one minute to talk, partners will change and begin the process anew with different prompts.

Cooperative Geometry



- ✦ If possible, get 4 people in each group.
- ✦ Each group member is given 3 pieces.
Member 1 is given all A pieces; Member 2 is given all B pieces; etc.
- ✦ When all the pieces are put together, the group will have created 4 separate and equal squares.

Cooperative Geometry Rules



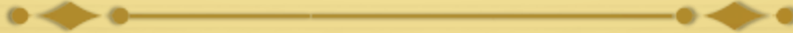
- ✦ No talking.
- ✦ You may give a piece to another player.
- ✦ You may not take a piece.

Discussion Questions: Cooperation



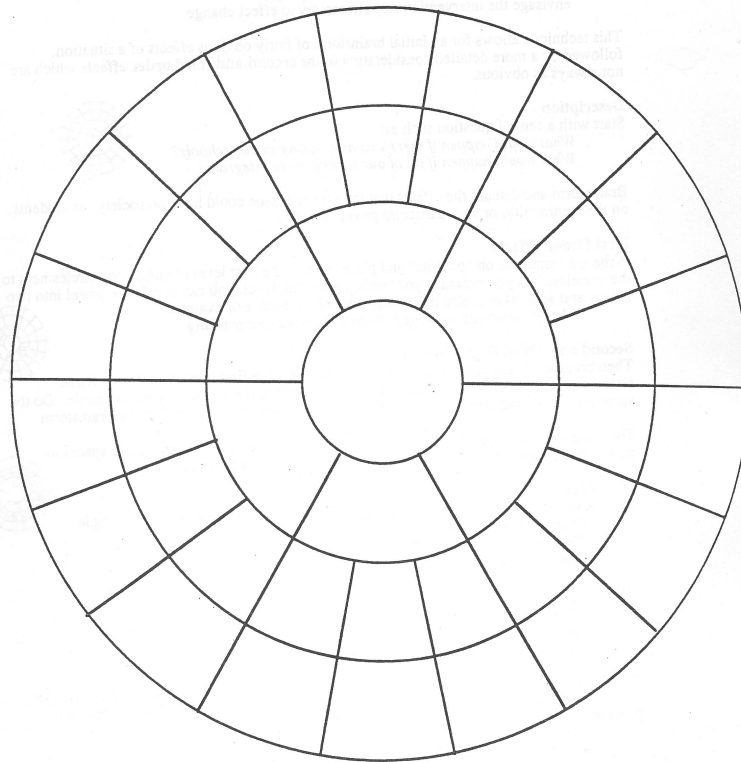
- ✦ What were your feelings if you finished your square and then began to realize that you would have to break it up and give away a piece(s)?
- ✦ How did you feel about the person who was slow at seeing the solution? If you were that person, how did you feel?

Discussion Questions: Discourse and Language Issues



- ✦ If you could have talked, how would that have helped or hindered the process? How would this experience been different?
- ✦ If you were a non-native English speaker, how would you have felt while doing this activity?

EFFECTS WHEEL

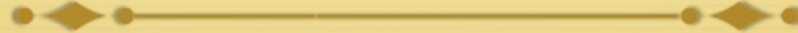


The Effects Wheel is...



- ✦ a useful teaching tool and staff development strategy for a variety of contexts.
- ✦ particularly useful as a brainstorm or discussion focus for a small group interested in exploring an issue in depth.
- ✦ especially powerful for equity discussions where the interactions and social effects are complex.

The Effects Wheel can be used to...



- ✦ anticipate the effects of inequities.
- ✦ assess the effects of these inequities on people.
- ✦ envisage the intervention steps necessary to effect change.

The Effects Wheel...



- ✦ allows for an initial brainstorm of fairly obvious effects of a situation, followed by a more detailed consideration of the second and third order effects that are not always as obvious.
- ✦ starts with a central question such as:
What would happen if the nearest grocery store was at least 10 miles from your home?

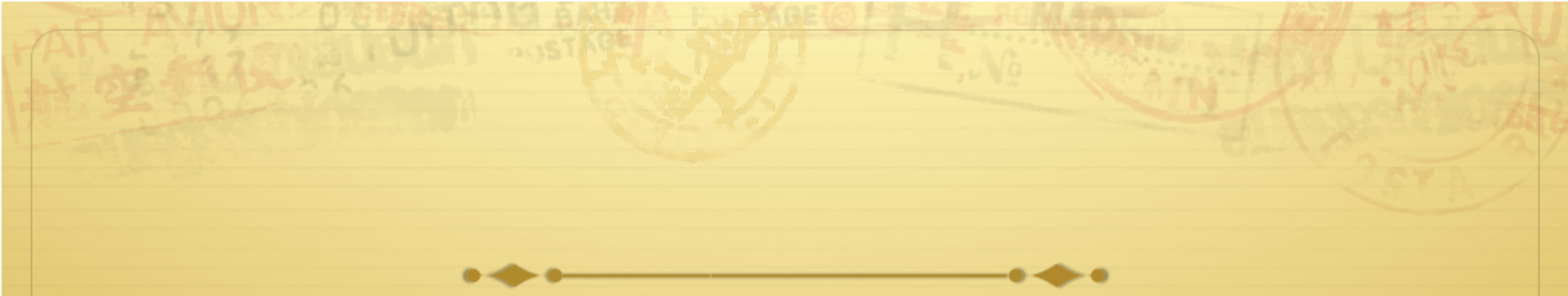
Central Question for Effects Wheel

- ✦ One of the five goals of TODOS is “to inform families about educational policies and learning strategies that will enable their children to become mathematically proficient.”
- ✦ *What if our schools involved more Latino families in their children’s mathematics education?*

Debriefing Questions



- ✦ What trends are suggested by the completed wheel?
- ✦ Were there any surprises?
- ✦ What direction does the wheel indicate for your work?



Necessary to reflect on our
biases and expectations

Thoughts of high school senior ELLs from Louisville, Kentucky

(from Beyond Good Teaching, NCTM 2012)

What ELLs Observe	How ELLs Respond
Teachers think they are saving us an embarrassment by not calling on us.	But not calling on us makes us feel invisible.
Teachers think they are doing us a favor by always grouping us together.	We like to work together, BUT WE NEED to work with all of our classmates.
Teachers give us identical assignments instead of accommodations for our needs.	We need accommodations to help us meet YOUR targets.

Alphabet Line-Up



- ✦ Is an inclusion activity
- ✦ Can be used as a brainstorming tool or to debrief an issue
- ✦ Form a line and assign a letter to each person.
- ✦ Everyone is responsible for thinking of a word that begins with his/her assigned letter that is related to _____.

Other research resources

- ✦ TODOS: Mathematics for All
<http://www.todos-math.org>
- ✦ Center for the Mathematics Education of Latinos/as
<http://math.arizona.edu/~cemela/english/>
- ✦ Understanding Language
<http://ell.stanford.edu/>
- ✦ Mathematics for English Language Learners
<http://www.tsusmell.org/>

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