What is Assessment?

Purpose:
Participants will develop a concept map of their perception of assessment and what it means to them. They will read and discuss "*The Assessment Principle"* from the NCTM *Principles and Standards for School Mathematics* (2000).

Overview:
Participants will be provided an example of a concept map with descriptors. They will be asked to develop a concept map individually for the "big idea" of assessment. Then they will share key ideas on their maps within a small group and discuss "one interesting observation" with the whole group. As a culminating activity, participants will read and discuss "*The Assessment Principle"* from the NCTM *Principles and Standards for School Mathematics* (2000).

TExES Mathematics 4-8 Competencies. The beginning teacher:
VI.019.A Demonstrates an understanding of the purpose, characteristics, and uses of various assessments in mathematics, including formative and summative assessments.

Materials.
- Blank paper for concept map development
- Markers
- Chart paper
- Transparency film

Terms.
Concept map, assessment, formative, summative, on-going assessment

Transparencies.
- *Concept Map: Problem Solving*
- *Concept Map Uses*
- *Descriptors of Assessment*

References:
NCTM(2000). *Principles and Standards for School Mathematics, "The Assessment Principle"* (pp. 22-24). Reston, VA: National Council of Teachers of Mathematics.

TEXTEAMS Practiced-Based Professional Development: Middle School Assessments(2003). Austin, TX: The Charles A. Dana Center.

Bartels, Bobbye H. "Promoting Mathematics Connections with Concept Mapping". *Mathematics Teaching in the Middle School.* Volume 1, No. 7 (November-December 1995): pp. 542-549.

Procedure:

Steps	Questions/Math Notes
1. Inform participants that they will be making a concept map of "assessment". Ask for volunteers to share their understanding of the characteristics or components of a concept map. Show the transparency "*Concept Map: Problem Solving"* and emphasize the links among the concepts or ideas. Explain that this map represents one person's view of problem solving and that there are many concept maps that could be made for this big idea.	Ask participants questions to stimulate their thinking about a concept map and assessment. *What do you observe about the "Concept Map: Problem Solving"?* *What are the big ideas represented in this map?* *How do these ideas relate?* *How are other ideas connected to the big ideas on this map?* *What are other ideas that you would include on this concept map for problem solving? How would you include these ideas?* *Summarize with the idea that a concept map is a cognitive tool that is used to show the relationships among concepts or ideas.*
2. Have participants work independently for about 5 minutes to develop a concept map that reflects their view(s) of "assessment". After they have completed their concept maps, have them discuss the maps within a small group. Inform them that they will be asked to share "one interesting observation" from the discussion. Ask each group to share "one interesting observation" about assessment from their discussion. Have participants write their name on their concept maps and save until the end of the session.	*How were your concept maps alike? How were they different?* *What was "one interesting observation" from your group discussion of the concept maps?* *What would you like to know more about based upon your group discussion of assessment?*
3. Ask participants to put "heads together" with a partner and brainstorm ways that a concept map could be used in the classroom setting with students. Have each group share one idea for the use of a concept map in the mathematics classroom. Continue having each group share one idea until each group has had two opportunities for input. Write each idea on an overhead transparency. Summarize with the transparency *"Concept Map: Uses"* and compare to those ideas generated by the group.	*How could you use a concept map in the mathematics classroom as a learning tool?* *How could you use a concept map in the mathematics classroom as an assessment tool?* *What are other way(s) you could use a concept map in the mathematics classroom?*

4. Have participants read *"The Assessment Principle"* (pp. 22-24) of the NCTM *Principles and Standards for School Mathematics* (2000). Ask participants to work in small groups to discuss the "big ideas" of this article. Have each group report on one "big idea" presented in the article. Record these ideas on chart paper or on an overhead transparency.	*How does assessment connect to student learning?* *How can you provide ongoing feedback to students?* *How can assessment be used to inform instruction?*