Evaluate

Purpose:
Evaluate judicious uses of technology in the mathematics classroom.

Descriptor:
Participants will review the instructional phases of this professional development and the classroom-ready lessons according to the list of attributes generated in the elaborate phase of the professional development. Participants may make revisions to the list of attributes. Participants will engage in discussion about how each lesson exhibits a judicious use of technology; participants will address the question, "How does the use of technology in this student lesson help me teach the concepts and skills more effectively and efficiently?"

Duration:
2 hours

Materials:
- Small (1" x 1.5") restickable notes
- Chart paper
- Markers
- Tape to adhere chart paper to the wall

Leader Notes:
The Evaluate phase is a time for participants to reflect upon their experiences and apply their knowledge to a new situation. The facilitator can deduce from the participants' actions how well they have been able to develop a sense of the judicious use of technology, including when it is appropriate or not appropriate to use technology to teach the mathematics TEKS. Further, participants should be able to discern when it is appropriate to use which technology.

Use the following steps to conduct the Evaluate phase of the institute.

1. *Distribute small restickable notes to each participant.*
2. *Assign different phases of this professional development to pairs of participants.*
3. *Prompt each pair of participants to use the restickable notes to highlight locations in each phase of the professional development that make judicious use of technology, according to the criteria on the* ***Transparency: Encouraging Judicious Use of Technology****. The restickable notes should be used to highlight those attributes of the teaching strategies outlined during the Elaborate Phase of this professional development.*
4. *After each pair has had time to evaluate the given phase of the professional development, prompt each pair of participants to create a summary of its findings on chart paper.*

   Sample responses might include:

Using the Internet to gather real-time data to test mathematical models makes the mathematics more relevant to students.

Data collection via technology allows students to focus on the concept of functional relationships instead of getting bogged down in non-technology data collection.

Using technology to collect data saves valuable time in the classroom. Instead of spending a whole class period generating data with paper and pencil constructions, students can generate the same data set in minutes.

Using Excel to generate scatterplots and regression equations allows students to build graphics that can be pasted into Word or PowerPoint quickly.

5. *Identify a location in the room for each phase of the professional development. Direct participants to post their summaries in the appropriate location.*
6. *Perform a gallery walk through each phase, asking participants to determine which teaching strategies for judicious use of technology seemed to have the greatest impact on the given phase.*
7. *Prompt participants to share any new thoughts that should be added to the classroom suggestions for each teaching strategy.*
8. *Distribute the classroom-ready lessons to each participant. Prompt each participant to continue the evaluation process for judicious use of technology, using the classroom-ready lessons as the context for evaluation. The participants should use the restickable notes to highlight those parts of each lesson that reflect the four teaching strategies for developing judicious use of technology.*
9. *As time allows, offer small-group and whole-group opportunities for participants to share what participants highlighted.*
10. *Redirect participants' attention to the four statements made at the beginning of the professional development session. Ask the participants if they would "shift" the placement of their sticky dots. If they respond with a "Yes," ask the participants why they would shift the placement of their sticky dots.*
11. *Draw an end to the professional development session with a parting thought rather than a closing thought so that participants leaving thinking, "How will I use what I learned?" rather than, "That was a good session." Examples of such parting thoughts include:*
    a. *As you leave, please consider ways that you might include the use of data and technology in your classroom next week.*
    b. *As you leave, please consider how you might best make use of the computer or computers available for your classroom use.*
    c. *As you leave, please consider how students might be equipped to ask better questions about what they are learning when they have graphing calculators in their hands.*

Transparency: Encouraging Judicious Use of Technology

- How did the activity promote careful decision making about the use of technology?
- How did the activity integrate technology into the learning of mathematics?
- Was technology use ever restricted for the purpose of enhancing learning? Why?
- How did the technology facilitate discussion about “algebraic sense”?

Gallery Walk Observations

Explore/Explain I: Flying Off the Handle	How did the activity promote careful decision making about the use of technology? How did the activity integrate technology into the learning of mathematics? Was technology use ever restricted for the purpose of enhancing learning? Why? How did the technology facilitate discussion about "algebraic sense"?

Explore/Explain II: A Golden Idea	How did the activity promote careful decision making about the use of technology? How did the activity integrate technology into the learning of mathematics? Was technology use ever restricted for the purpose of enhancing learning? Why? How did the technology facilitate discussion about "statistical sense", "algebraic sense", or "geometric sense"?

Explore/Explain III: I've Seen the Light!	How did the activity promote careful decision making about the use of technology? How did the activity integrate technology into the learning of mathematics? Was technology use ever restricted for the purpose of enhancing learning? Why? How did the technology facilitate discussion about "statistical sense" or "algebraic sense"?

Elaborate: The Doomsday Model	How did the activity promote careful decision making about the use of technology? How did the activity integrate technology into the learning of mathematics? Was technology use ever restricted for the purpose of enhancing learning? Why? How did the technology facilitate discussion about "statistical sense" or "algebraic sense"?