

# PD Support Materials

## Organizing

### Directions for Using the Overview Slideshow

Each Instructional Strategy Guide contains an overview slideshow that sets the context for the evidence-based practices that are presented in Teach with Tech and illustrated in the Lesson in Action. It also identifies ways to differentiate instruction based on the Universal Design for Learning (UDL) principles. Discussion questions are embedded in each slideshow.

#### PD Goals

- ▶ To set a context for delving into Teach with Tech and the Lesson in Action
- ▶ To elicit prior knowledge and build background knowledge

#### PD Materials

- ▶ The slideshow within the Instructional Strategy Guide
- ▶ Discussion questions (embedded within the slideshow and provided as a handout below)

#### PD Activity

- ▶ Ask teachers to review the slideshow (either before or during the session)
- ▶ Elicit conversation using discussion questions
- ▶ As a follow up, share key ideas

See the PD Facilitator Guide for related activities to support ongoing professional learning.

## Discussion Questions for the Organizing in Math Slideshow

### DISCUSSION QUESTIONS

1. How do you explain organizing to your students?
2. How does organizing connect with the CCSS Math Practices?
3. How can organizing help a struggling student get "unstuck" when working with a problem?

### DISCUSSION QUESTIONS

1. In what ways do you differentiate instruction when you introduce organizing information to your students?
2. What technology tools have you used to enhance instruction?
3. What criteria do you use for selecting organizers to show your students?

### DISCUSSION QUESTIONS

1. What challenges do your struggling students face in using organizers?
2. What strategies do you use to help students overcome their challenges?
3. Which formative assessment strategies do you find most effective?

## Directions for Using Teach With Tech

Each Instructional Strategy Guide contains a Teach with Tech section, which presents suggestions for differentiating evidence-based practices and personalizing instruction using a range of technology tools.

### PD Goals

- To examine and discuss evidence-based practices in terms of:
  - What they are and how they can be used to differentiate instruction
  - How technology tools can be integrated to further meet the needs of struggling students
- To generate additional instructional strategies based on the needs of your students and the technology tools that are available in your school

### PD Materials

- ▶ Teach with Tech (which is located within the Instructional Strategy Guide). This can be:
  - Distributed as a handout
  - Projected onto a large screen
  - Viewed on laptops, tablets, and other devices
- ▶ A companion chart (below), titled ***Differentiate the Strategy***. The chart is divided into three columns:
  - The left-hand column, “Evidence-Based Practices,” which is divided into three sections (one for each of the three evidence-based practice headings)
  - The middle column, “PowerUp Suggested Strategies,” which lists the strategies presented within PowerUp
  - The right-hand column, “Differentiating Instruction with Technology,” which has been left blank so that it can be used to record ideas brainstormed by the group of teachers in your school

### PD Activity

- ▶ Review Teach with Tech (contained within the Instructional Strategy Guide)
  - Review the strategies under each of the three evidence-based practice headings:
    - Discuss how relevant they are to your students’ needs
    - Compare them with current classroom practices
    - Identify new ideas that could be implemented
  - Discuss the accompanying Quick Views
  - Explore and discuss the identified UDL Guidelines
- ▶ Introduce the companion chart titled ***Differentiate the Strategy***
  - Collaboratively (in small groups or pairs) brainstorm ideas to include in the right hand column (“Differentiating Instruction with Technology”) by:
    - Exploring possible technology tools available in the school
    - Sharing ideas
  - Identify what it would take to implement these ideas in the classroom

See the PD Facilitator Guide for related activities to support ongoing professional learning.

## Differentiate the Strategy: Organizing in Math

Evidence-based Practice	PowerUp Suggested Strategies	Differentiating Instruction with Technology
Provide Clear Explanations	Introduce this strategy by presenting a list, table, chart, or other graphic organizer (using a spreadsheet or concept mapping tool) and point out why each kind of organizer is helpful (for example, to see patterns, to quickly find a particular example or piece of information, or to be sure that you aren't missing any examples).	
	When you present a particular kind of organizer, give students some time to think about how the information is organized before discussing the features that make the organizer helpful.	
	Let students suggest their own ways of organizing information about a topic they are studying or a problem they are solving. You can modify their suggestions as needed, but be sure to explain why you are making changes.	
Give Students Strategies and Models	Explain to your students that organized lists are fairly easy to create as long as there aren't a lot of items. Show them an example of the kind of list that can be created for a problem, and explain how the list can be used to organize the information that is relevant to the problem.	
	Explain that charts are pictures that organize information. Some charts are called graphs (line charts or line graphs, pie charts or pie graphs) and others are simply diagrams. Students who are particularly visual or creative might respond better to charts than to tables or lists, so when possible, present a chart in addition to a table or list.	
	Use technology to greatly increase the organizing options available to students. Have students experiment with computer-based and paper-and-pencil versions to understand the benefits of each. Computer-based tools—such as spreadsheets and concept mapping tools—can check that data is organized correctly, make information easier to sort, and save time, especially when creating charts.	
Provide Ongoing Formative Assessment	As your students work on problems, watch for the kinds of graphic organizers they use. Knowing which organizers each student prefers may be helpful to you as you introduce new mathematical content. When a student uses a graphic organizer that you think may not be helpful, ask the student to explain the format and why he or she chose it.	
	Employ a two-step strategy when a student doesn't understand something you (or another student) have said that includes math terms. First, make sure the student understands the terms by asking about their meaning. If you can clarify the terms, prompt the student to use the definition to paraphrase the statement or idea in question.	
	Tap prior knowledge by creating a concept map that links what they're learning to what they have already learned. During the unit, have them add to and modify the map. You can then use their maps to talk with them about how they understand the concepts, and about any misconceptions you may have noticed.	

## Directions for Using the Lesson in Action

Every Instructional Strategy Guide includes one or more Lessons in Action. Each lesson provides a classroom example of the relevant evidence-based practice. The example illustrates how a teacher aligns instruction with the Common Core State Standards, differentiates instruction to meet the needs of her diverse students, uses technology to personalize learning, and engages in formative assessment.

### PD Goals

- ▶ To analyze the Lesson in Action and reflect on current teaching practice
- ▶ To provide teachers with a foundation for their own lesson planning

### PD Materials

- ▶ The Lesson in Action you selected from the Instructional Strategy Guide, which can be:
  - Distributed as a handout
  - Projected onto a large screen
  - Viewed on laptops, tablets, and other devices
- ▶ The companion handout (titled **Scavenger Hunt**), which can also be distributed as a handout, projected onto a large screen, or viewed on devices

### PD Activity

- ▶ Analyze and discuss the Lesson in Action
- ▶ Use the **Scavenger Hunt** handout to discuss how the teacher is:
  - Aligning the lesson with the Common Core State Standards
  - Employing the strategies suggested in Teach with Tech
  - Using technology to support struggling students
  - Personalizing instruction through differentiation
  - Translating UDL principles into action
- ▶ Compare the Lesson in Action with current practice in your school and classrooms
- ▶ Identify the new ideas the Lesson in Action offers for using:
  - Evidence-based practices
  - Differentiated instruction and UDL
  - Technology tools
- ▶ Use the Lesson at a Glance for lesson planning:
  - Discuss the sequence of the instructional steps: What? Why? How?
  - Discuss how the instructional steps can be used as a basis for lesson planning
  - Create a modified lesson plan to meet student needs by working individually or in collaboration

See the PD Facilitator Guide for related activities to support ongoing professional learning.

## Scavenger Hunt



**Within the Lesson in Action, can you find an example of how the teacher...**

1. Aligns instruction to meet the Common Core State Standards?
2. Uses one of the Teach with Tech suggested practices?
3. Uses technology to support struggling students?
4. Personalizes instruction through differentiation?
5. Translates UDL principles into action?

**If you can't find an example, what would you have done?**