STUDENT ACHIEVEMENT PARTNERS

USER'S GUIDE: AN INTRODUCTION TO THE MATHEMATICS INSTRUCTIONAL PRACTICE GUIDE

Shifts for Mathematics

1. **Focus** strongly where the standards focus.
2. **Coherence:** Think across grades and link to major topics within grades.
3. **Rigor**: In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

The Introduction to the Instructional Practice Guide for Mathematics Module focuses on the Instructional Practice Guide (IPG) as a tool for observation and reflection. The Instructional Practice Guide is for teachers, and those who support teachers, to build understanding and experience with instruction aligned to college- and career-ready (CCR) standards, including the Common Core State Standards (CCSS). The module also includes a review of the three instructional Shifts in Mathematics. Within the module, there are activities and discussions based on the Core Actions that will prepare participants to use the Instructional Practice Guide.

How to Get Started: Read this user's guide paying particular attention to the materials/preparation required by facilitator section in the table below. You are encouraged to customize any or all portions of this module to meet your needs or the needs of your audience.

Objectives of this Module:

- Understand the key Shifts for mathematics and what they look like in practice.
- Identify teacher and student actions that are present in CCR-aligned lessons, as identified in the Instructional Practice Guide.
- Observe a lesson using the Instructional Practice Guide.

What's in this Module?

- User's Guide
- PowerPoint presentation with embedded facilitator notes (available with hyperlinked URLs for each video)
- Participant Materials
- Links to Additional Resources

Using this Module

This module is designed for participants with some familiarity with the instructional Shifts in Mathematics. If participants are not familiar with the Shifts, they may benefit from first completing the Introduction to the Math Shifts Professional Development Module.

This module is designed to take four to five hours. However, it is designed to be flexible and can be used in a variety of professional development settings. For example, the module can be split into one-hour increments to use during faculty meetings or Professional Learning Communities. In a two- to three-hour block of time, participants can engage with all aspects of the Instructional Practice Guide and complete the Putting It All Together observation at a later time.

Participant materials should be copied ahead of time or made available to use electronically.

Outline of Module:

PPT Slide #: Big Ideas and Activities	Materials/Preparation Required by Facilitator
1–27: Overview of module and an introduction to the instructional Shifts for mathematics.	• Review PPT slides for big idea, details, and background knowledge • Watch video (slide 8) • Copy Common Core Math Shifts at a Glance and Focus By Grade Level • Additional Resources: Publishers' Criteria for Mathematics (K-8 and HS) • (Optional) PPT slides for participants
28–33: Design and structure of the Instructional Practice Guide.	• Review PPT slides for big idea, details, and background knowledge • Copy *Mathematics Instructional Practice Guide* for K–8 and/or HS, based on participants
34–37: Core Action 1: Ensure the work of the enacted lesson reflects the Focus, Coherence, and Rigor required by college- and career-ready standards in mathematics. • *Activity: Finding Evidence* Participants will relate indicators to the Shifts, identify key words in each indicator, identify where to look for evidence, and give examples of indicators being met. • *Optional Activity: Lesson Plan Review* Using a lesson plan from their preferred grade band, participants will use the Instructional Practice Guide to note the evidence anticipated for Core Action 1. • *Discuss: How Do I Know?* Consider the questions that can help determine whether a lesson reflects the Shifts.	• Review PPT slides for big idea, details, and background knowledge • Copy *Core Action 1: Finding Evidence Activity* • Review *Core Action 1: Finding Evidence (KEY)* • (Optional) Select and copy lesson plan for participants to review (K–5, 6–8, High School, or your own) • Copy *Core Action 1: How Do I Know?*

38–42: Core Action 2: Employ instructional practices that allow all students to learn the content of the lesson. • *Activity: Finding Evidence* Participants will identify key words in each indicator, identify where to look for evidence, and give examples of indicators being met or not met. • Discuss *How Do I Know?* Consider the questions that can help determine whether the instructional practices during a lesson all students to learn the content of the lesson.	• Review PPT slides for big idea, details, and background knowledge • Watch video (slide 40) • Copy *Core Action 2: Finding Evidence Activity* • Review *Core Action 2: Finding Evidence* (KEY) • Copy *Core Action 2: How Do I Know?*
43–48: Core Action 3: Provide all students with opportunities to exhibit mathematical practices while engaging with the content of the lesson. • *Activity: Finding Evidence* Participants will identify key words in each indicator. • *Activity: Role Play* Participants will create a short role play that illustrates a given indicator from Core Action 3. Role plays will show both teacher and student actions that are evidence of the indicator. • Discuss *How Do I Know?* Consider the questions that can help determine whether all students have opportunities to exhibit mathematical practices while engaging with the content of the lesson.	• Review PPT slides for big idea, details, and background knowledge • Copy *Role Play Activity* • Copy *Core Action 3: How Do I Know?*

49–54: Putting It All Together and Conclusion • *Activity: Putting It All Together* Participants will observe a lesson, review related artifacts and use the Instructional Practice Guide to reflect on each indicator.	• Review PPT slides for big idea, details, and background knowledge • Copy *Putting It All Together* • Copy *Best Practices for Low Inference Notes* • Identify a lesson for observation.[1] (Ideally, watch the video in advance and note evidence in the IPG) When available, copy lesson plan, handouts, and/or student work for the observed lesson. • (Optional) Prepare posters and sticky notes for Gallery Walk
55–61: Conclusion • Share additional resources that align with the IPG.	• Review PPT slides for big idea, details, and background knowledge • Additional resources: ○ Instructional Practice Guide (digital version) ○ Lesson Planning Tool (digital version)

[1] Options include:
a) Arrange for participants to observe a lesson in person, as part of the session.
b) Share a video of a teacher from your setting. If possible, the video should be unedited.
c) Use a video available online. Examples can be found on Achieve the Core at: https://bit.ly/2nJdYsk. Please note that these lessons are not exemplars but are lessons that illustrate what a participant might observe in a classroom.

Video Resources:

Links to videos that are featured in the Power Point Presentation

- Slide 8: "The Common Core Shifts in Mathematics." http://vimeo.com/84081059
- Slide 40: Don't Leave Out the Math: Phil Daro on Teaching. http://vimeo.com/84081082

Please submit any feedback on this module to info@studentsachieve.net.