



Welcome Back!

C²S² – Mathematics

Grade 8

Session 2



Agenda

I. Welcome

II. Warm-Up

III. Evidence of SMPs 1, 4, and 6

IV. Analyzing Student Work

Break

V. Trying on the Math

VI. Instructional Shifts

Lunch

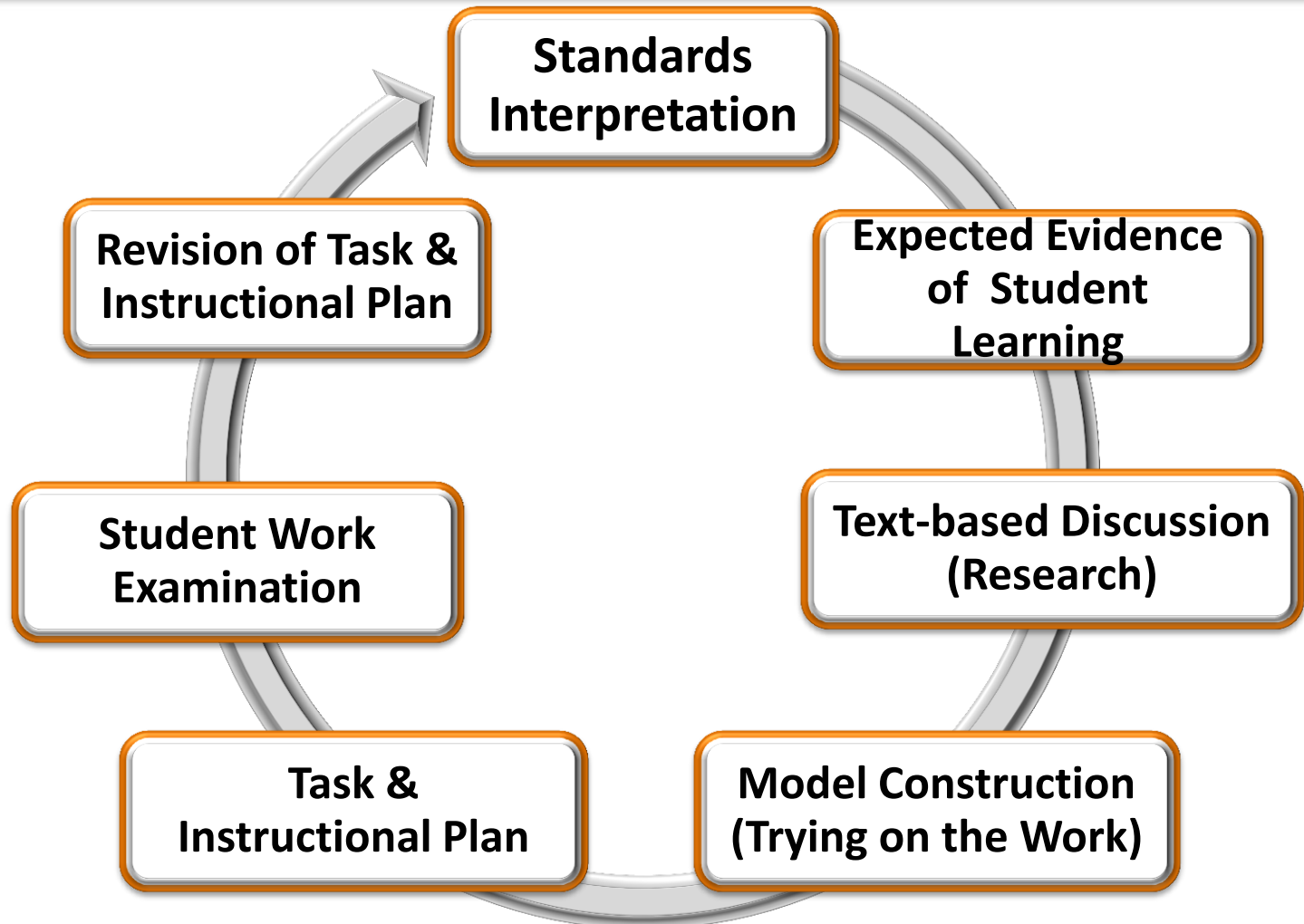
VII. Instructional Shifts continued

VIII. Lesson Planning

IX. Evaluation/Reflection



Design Methodology





Evidence of SMPs

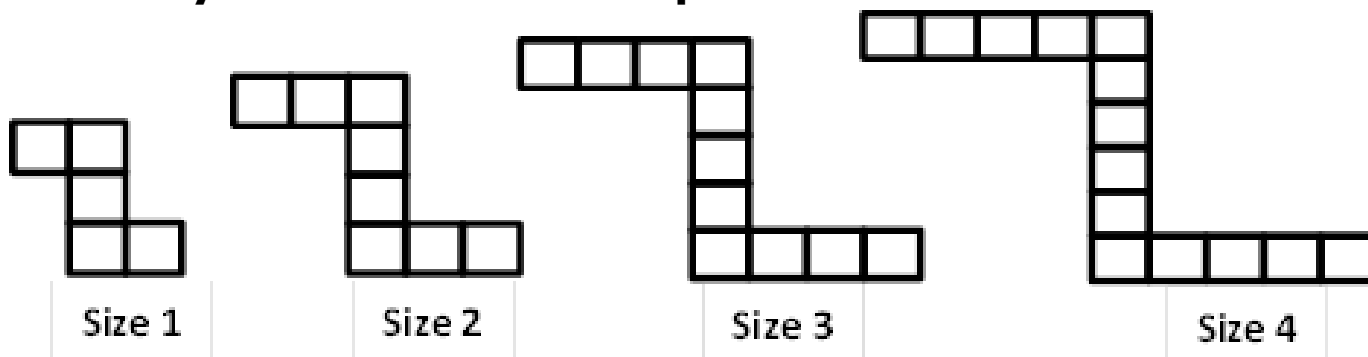
Review: SMPs

#1: Making Sense of Problems and Persevere in Solving Them

#6: Attending to Precision

Think of an exemplary student response that provides evidence for Math Practice 1.

How many tiles will be in the picture at Size 8?





Analyzing Student Work

Reviewing evidence of
Standards of Mathematical
Practices 1, 4 and 6



Analyzing Work

- Work in partners or triads
- Look at the student work samples we provide for you
 - Complete the “evidence recording” template
- Create two piles:
 - 1) Samples that *have* evidence of SMP 1, 4, or 6
 - 2) Samples that *don't have* evidence of SMP 1, 4 or 6



Analyzing Student Work

- Examining your student work
- Work in partners or triads
 - Complete the “evidence recording” template



Analyzing Student Work

As a table group...

- Choose 1 or 2 pieces of student work that exemplifies evidence of progress towards Practice 1, 4 or 6
- Place a post-it on the student work that identifies *where* in the work students were making sense, persevering, and/or attending to precision



Analyzing Student Work

- Gallery Walk
 - Place your 1-2 pieces of student work (with the post-its) on the wall
- As you are walking, take post-its...
 - Write questions and comments



Break Time

10 minutes



Trying on the math

Linear Functions



Instructional Shifts in Action

- **Focus:** What is the enduring mathematical understanding from this lesson? (share as a table/whole group)





Instructional Shifts in Action

- **Coherence:** If students can understand linear functions, how does that help them when they get to other types of functions (like quadratics)? (Share as a table/whole group)





Instructional Shifts in Action

- **Rigor (fluency, deep understanding, application, dual intensity):** What did the teacher do to allow students to gain an understanding of linear functions? (share as a table/whole group)





Lesson Planning Part A

- Use the enhanced lesson planning guide
- Complete section A
 - What is the focus of your lesson?
 - What should students have learned beforehand? (prior knowledge)
 - How will their new understanding enrich future learning?





Lunch

1 hour



Shifts

Read Shift: **Focus**

- Write 2-3 key ideas
- Write down what a teacher's **shift in focus** looks like in the classroom
- **WHOLE-GROUP SHARE OUT:**
In relation to the prompt for "Focus" on your "Shifts in Action" worksheet, what new understanding do you have?



Shifts

Read Shift: **Coherence**

- Write 2-3 key ideas
- Write down what a teacher's **shift in coherence** looks like in the classroom

- **WHOLE-GROUP SHARE OUT:**

In relation to the prompt for "Coherence" on your "Shifts in Action" worksheet, what new understanding do you have?



Shifts

Read Shift: **Rigor (fluency, deep understanding, application, dual intensity)**

- Write 2-3 key ideas
- Write down what a teacher's **shift in rigor** looks like in the classroom

• WHOLE-GROUP SHARE OUT:

In relation to the prompt for "Rigor" on your "Shifts in Action" worksheet, what new understanding do you have?



Answer getting vs. learning mathematics

USA:

- **How can I teach my kids to get the answer to this problem?**

High Performing Countries:

- **How can I use this problem to teach the mathematics of this unit?**

[Phil Daro]



Teach at the speed of learning

- More time per concept
 - More time per problem
 - More time per student talking
- = less math problems per lesson

[Phil Daro]



Lesson Planning Part B

- Complete section B of the lesson planning guide
- Be prepared to share out
- Share your expected evidence on a half-sheet of paper
 - Turn it in





Lesson Planning Part C

- Complete section C of the lesson planning guide
- Be prepared to share out





Reflection

- Please complete your evaluation

