Social, Emotional, and Academic Development (SEAD) Lesson Plan for Mathematics

GRADE LEVEL/COURSE AND MATH STANDARD(S)

Grade 7

7.SP.A Use random sampling to draw inferences about a population.
7.SP.A.1 Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.

INTRODUCTION

This is a teacher-created lesson and utilizes the lesson planning template from Stride 3: *A Pathway to Equitable Math Instruction: Creating Conditions to Thrive* (pages 13–14).

The lesson is intended to:

- Provide students opportunities to engage in math discourse, promoting teamwork and discussion.
- Engage students in the Three Reads protocol that will support their developing understanding of sample populations. The protocol also supports students who may need language scaffolding.
- Create a space for students to question and discuss statistical ideas and vocabulary as they reason through the examples and determine which ones are valid samples.

SEAD THEME

	Identity
X	**Discourse**
	Agency
	Belonging

SMP(S) TO SUPPORT THE SEAD THEME

X	**SMP 1: Make sense of problems and persevere in solving them.**
	SMP 2: Reason abstractly and quantitatively.
X	**SMP 3: Construct viable arguments and critique the reasoning of others.**
	SMP 4: Model with mathematics.
	SMP 5: Use appropriate tools strategically.
X	**SMP 6: Attend to precision.**
	SMP 7: Look for and make use of structure.
	SMP 8: Look for and express regularity in repeated reasoning.

LESSON OBJECTIVE/GOAL

Objectives of lesson:

- We will use random sampling to draw inferences about a population.
- We will answer real-world questions to understand that statistics can be used to gain information about a population.

STEPS

Each group of students follows the Three Reads protocol. This is listed for them at the beginning of each set of task cards/slides.

Set A

Set B

Set C

As students work through their set of tasks, the protocol they are asked to follow is:

1st Read: Read the card aloud to the group while displaying the card on your shared screen.
Goal: Comprehend Text—Make sure all words are clear for all teammates.

2nd Read: Re-read the card aloud to the group while displaying the card on your shared screen.
Goal: Analyze and Discuss—Facilitate a discussion to come to a consensus of what is being asked or what math needs to be solved.

3rd Read: Re-read the card aloud to the group.
Goal: Brainstorm—together—ways to solve the problem.

As the students are engaged in discourse and the Three Reads protocol, the teacher is rotating to the small groups:

- Checking for routines
- Answering questions when teams get stuck
- Providing support as needed
- Modeling the process for teams in need
- Monitoring answer sheets for accuracy
- Monitoring language use and statistical vocabulary for accuracy and understanding
- Facilitating discussion, asking questions, to keep the process clean

SUMMARY/REFLECTION OF LESSON

This was a great way to get students engaged with the content of the lesson. It allowed for a variety of student techniques to solve problems, without having them feel like they have to jump in and know what to do right away. Students used the Three Reads protocol to ask

questions of each other and felt more confident when it was their turn to lead the protocol themselves.

When the Three Reads protocol has been established and students truly know how to engage with it, the learning becomes richer, and the discussions become more authentic. Some of the groups needed a fair amount of support for the first few rounds and still struggled to finish the task when given extra time. Again, this is a great routine that works even better when students have engaged multiple times over the course of the school year.

Some students were able to point out that this was a strategy they recall using in their English/Language Arts class and felt comfortable with the three reads. Seeing a strategy being used in multiple disciplines is a great way to bridge learning and allows students to de-compartmentalize their learning.

For students who needed additional support, it was provided for them by both their peers' engagement and teacher monitoring as they led the Three Reads protocol. Peer support is always available during the protocol since the student leading the three reads shared the screen to their peers to follow along. If any word or phrase was problematic, all teammates had access to the task card through the screen share, and team belonging and community was built through this.