Lesson 15: Estimation Exploration

Standards Alignments

Addressing 5.NBT.B.5

Teacher-facing Learning Goals

- Fluently multiply multi-digit whole numbers using the standard algorithm.

Student-facing Learning Goals

- Let's create an Estimation Exploration.

Lesson Purpose

The purpose of this lesson is for students to apply their understanding of multi-digit multiplication and the standard algorithm of multiplication to create an Estimation Exploration activity.

This lesson offers teachers the opportunity to listen to ways in which students reason about multi-digit multiplication. After the warm-up, students create their own Estimation Exploration activity and then facilitate their Estimation Exploration with other students in the class. Students can draw pictures or find images to use for their Estimation Exploration from books or other sources as the teacher determines or use actual objects from around the classroom.

Access for:

Students with Disabilities

- Action and Expression (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Estimation Exploration (Warm-up)

Materials to Gather

- Chart paper: Activity 2
- Colored pencils, crayons, or markers: Activity 2

Lesson Timeline

Warm-up	10 min

Teacher Reflection Question

Think about who volunteered to share their thinking with the class today. Are the same

Activity 1	20 min
Activity 2	15 min
Lesson Synthesis	10 min
Cool-down	5 min

students always volunteering, while some students never offer to share? What can you do to help the class understand the value of hearing the ideas of every mathematician in the classroom?

Cool-down (to be completed at the end of the lesson)

5 min

Reflection

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Student-facing Task Statement

In math class, it's important to listen to other people's ideas. During class today, what is something you learned by listening carefully to someone?

Student Responses

Sample response: I learned that thinking about other students' ideas helps me clarify my own understanding. When we were writing possible responses, I learned about how other students might think differently about the problem than I did.