

## Lesson 23: Bees are Buzzing (Optional)

### Standards Alignments

Addressing 4.NBT.A, 4.NBT.B.4

### Teacher-facing Learning Goals

- Add and subtract multi-digit whole numbers using the standard algorithm.
- Use place value understanding to make reasonable estimates.

### Student-facing Learning Goals

- Let's investigate insect populations.

### Lesson Purpose

The purpose of this lesson is to use estimation to make sense of a wide range of numbers and to use addition and subtraction to investigate how an insect population can change over time.

This lesson is optional because it does not address any new mathematical content standards. This lesson does provide students with an opportunity to apply precursor skills of mathematical modeling. In previous lessons, students developed place value understanding for numbers up to 1,000,000 and rounded, added, and subtracted numbers in this range. In this lesson, they apply their understandings and skills to make sense of facts about insects and investigate how an insect population changes over time.

Students make decisions and choices, adhere to mathematical constraints, use mathematical ideas to analyze real-world situations, and interpret a mathematical answer and whether it makes sense in the context of a situation. In doing so, they model with mathematics (MP4).

### Access for:

#### Students with Disabilities

- Representation (Activity 2)

#### English Learners

- MLR5 (Activity 1)

### Instructional Routines

Estimation Exploration (Warm-up)

### Lesson Timeline

Warm-up

10 min

### Teacher Reflection Question

As students worked together today, where did

Activity 1

20 min

you see evidence of a mathematical community?

Activity 2

15 min

Lesson Synthesis

10 min