Lesson 23: Bees are Buzzing

- Let's investigate insect populations.

Warm-up: Estimation Exploration: Bees

Record an estimate that is:

too low	about right	too high

23.1: Termites, Ants, and Bees

Here is some information about insects:

Termites

- Size of a colony: 100–1,000,000
- A queen lives for 30–50 years.
- There are 3,000–3,500 species of termites.
- The length of a termite is 4 to 15 millimeters.
- In some species, the mature queen may produce around 40,000 eggs a day.

Odorous House Ants

- Size of colony: up to 100,000
- A queen lives for 300–1,800 days.
- The length of an ant is 1.5–3.2 millimeters.
- Foraging ants travel up to 700 feet from their nests.
- There are 12,000–22,000 possible species.

Honey Bees

- Size of a hive: 10,000–60,000
- There are around 500 drones in a hive.
- A queen can lay about 1,500–2,000 eggs each day.
- A hive produces 7–40 liters of honey in a season.
- The length of a bee is 10–20 millimeters.

1. Here are some numbers that could represent facts about termites, house ants, and honey bees. What might each number represent?

number	what it might represent
2.4	
8	
487	
1,794	
6,905	
20,799	
530,097	

2. Add another number to the list. What about the insects might this number represent?

3. Discuss your answers with your partner. Be prepared to show or explain your reasoning.

23.2: Bee Population

An entomologist records the number of bees in their beehive over the course of several months. They record:

- the number of bees at the beginning of the month
- how many bees left (and didn't return) during the month
- how many new bees were added to the hive during the month

Unfortunately, some of the entries in the table are missing.

1. Complete the missing information in the table.

month	bees in the hive at the beginning of the month	new bees	bees that left the hive
May	20,000	9,378	342
June		15,870	970
July		14,965	
August	58,107		28,980
September	30,017	No data	No data

2. Discuss your responses with your partner. Be prepared to show or explain your reasoning.