Hovering Hummingbirds

Lesson Plan for *Hummingbirds*
Grade 2

Objective

To help students practice recording simple statistics and using subtraction to compare them.

Things Needed

- *Hummingbirds* book
- A large, open space
- Several stopwatches
- Whiteboard
- Paper and pencils

Before the Activity

Read *Hummingbirds* out loud as a class.

Activity

To start, open the book to pages 12 and 13. Ask the following questions:

- What does the word *hover* mean? (Answer: It means to stay in the air in one place.)
- How fast can a hummingbird flap its wings? (Answer: It can flap its wings up to 80 times per second.)
- What shape do the bird's wings make as it flaps? (Answer: A hummingbird twists its wings in a shape like a figure eight.)

Next, have students move to the open area. There should be enough space for all students to stretch out their arms without touching the students next to them. Explain that hummingbirds can flap their wings 80 times per second. Today, students will see how fast they can flap. Ask students to try making a figure eight with their arms, similar to how a hummingbird flaps its wings.

After giving the class a few moments to practice flapping, have each student find a partner. Then pass out the stopwatches, paper, and pencils. When a student says go, the partner will start the stopwatch. The student will do 80 figure-eight flaps as quickly as possible. As soon as the student finishes the 80th flap, the partner will stop the stopwatch. The partner will write down the number of seconds on the stopwatch. Then, the student and the partner will trade places, and the partner will be timed while flapping 80 times.

Next, explain that while a hummingbird flies, its heart can beat up to 1,260 times every minute. Ask students to try finding their pulses by placing a hand on their chests or two fingers under their jaws. Once students have found their pulses, you will say go and start a timer for one minute. Students should count the number of heartbeats until you say stop. Students should write down the number of heartbeats they counted.

Finally, have students bring their papers back to their desks. Write the following problems on the whiteboard for students to solve:

- A hummingbird can flap its wings 80 times in one second. How much longer did it take you to flap your arms 80 times?
- A hummingbird's heart can beat 1,260 times in one minute. How much smaller was your number of heartbeats in one minute?

As needed, provide prompting and support to help students set up the following equations:

- how much longer = [student's flapping time] – 1 second
- how much smaller = 1,260 times – [student's number of heartbeats]

Evaluation

Could students recall the facts about hummingbirds from the book? Could they set up and solve the math problems? Collect the papers at the end of class to check each student's subtraction.

Standards

This lesson plan may be used to address the Common Core State Standards' reading standards for informational texts, grade 2 (RI 2.1), and math standards, grade 2 (2.NBT.B.5, 2.NBT.B.7, 2.NBT.B.9).