

Inquiry **MiniLab**

LESSON 1: 20 minutes

How does exercise affect breathing rate?

If you have ever played or watched a sport, you probably noticed that exercise changes breathing rate. How does exercise affect the number of breaths you take in 30 seconds?

Procedure

1. Read and complete a lab safety form.
2. For 30 seconds, count the number of breaths you take while sitting quietly. Record your data. Repeat for two more trials.
3. Following your teacher's instructions, exercise briskly for 1 minute.


When your teacher tells you to stop exercising, immediately count the number of breaths you take in 30 seconds. Record your data. Repeat for two more trials.

Data and Observations

| Activity | Number of Breaths | | |
|------------|-------------------|---------|---------|
| | Trial 1 | Trial 2 | Trial 3 |
| Sitting | | | |
| Exercising | | | |

Analyze and Conclude

1. **Calculate** individual and class averages. How does your average breathing compare to the class average?

2.  **Key Concept** How does the change in breathing rate help your body maintain homeostasis?
