

# STUDENT GUIDE

## EXPLAIN 1 LESSON 20



### Part 1: Our Motivation

Record what we were trying to figure out that led to this investigation.



### Part 2: Developing an Explanation of Heart Rate and Breathing Rate Changes During Exercise

Using all the evidence you have gathered so far in this module, construct an explanation to answer our Module Questions, *Why are there so many changes to my body during exercise? How does milk help with recovery from these changes?* In your explanations, be sure to:

- Include explanations for the following effects of exercise
  - Increased breathing rate
  - Increased heart rate
  - Muscle burn sensation/muscle fatigue
- Describe how the muscle cells utilize anaerobic and aerobic cellular respiration to produce ATP over the course of an intense workout.
- Cite evidence from the data sets we analyzed and the Science Theater model we used.



### Part 3: Updating the Effects of Exercise Model

We will update the class Effects of Exercise Model. List 2-3 additions you would make to the class model in the space below. These may be:

- Organs and their function
- Specialized cells and their function
- Signals or molecules and where they move



#### Part 4: Asking New Questions

Record any new questions that you have that might help you:

- Find additional information about the changes in our bodies brought on by exercise and exercise of different intensities.
- “Fill in a gap” in your explanation or our class explanation.
- Settle an area of disagreement that we’ve identified in our explanations.

Write your questions in the box below.