STUDENT GUIDE EXPLORE 1D LESSON 19



Part 1: Our Motivation

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



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Part 2: Using a Model of Increased Breathing Rate, Heart Rate, and Fatigued/Burning Muscles During Intense Exercise

As a class, you will engage in a Science Theater model to determine why you are breathing faster during exercise.

As you review your role, record a summary of the role your cells and organ will play to increase heart rate, breathing rate, and produce fatigue and burning in the muscles. Describe what function your organ has and how specialized cells contribute to its function.

How Specialized Cells Contribute:

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Engage in the model. As you **enact** the model, record observations you make about the actions that various specialized cells take.

Organ & Specialized Cells:

Organ & Specialized Cells:

Organ & Specialized Cells	Role of Specialized Cells in Increasing Heart Rate, Breathing Rate, and Producing Fatigue and Burning in the Muscles
Lungs	
Heart	
Bloodstream	
Brain & Autonomic Nerves	
Brain & Somatic Nerves	
Skeletal Muscles	

As you **observe** the model, record how different organs and their specialized cells function to increase heart rate and breathing rate and produce fatigue and burning in the muscles.

Condition	Summary of Changes that Occur
Increased Heart Rate & Breathing Rate	
How Muscle Cells Get Energy for Movement	
Muscle Burn & Fatigue	

Reflect on how the lens of stability and change was useful in figuring out how the specialized cells support the body to produce cellular energy for exercise.