## **STUDENT GUIDE** EXPLORE 3 LESSON 28



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 to Explain How Muscles Recover From Soreness

As a class, you will engage in a Science Theater model to determine the mechanisms in the body that help muscles recover from soreness.

As you review your role, record a summary of the role your cells and organ will play in the muscle recovery process. Describe what function your organ has and how specialized cells contribute to its function.

How Specialized Cells Contribute:

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

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As you **observe** the model, record how different organs and their specialized cells function. Write or sketch your response as you choose.

Organ & Specialized Cells	Role of Organ and Specialized Cells in Recovering From Muscle Damage
Brain & Nerves	
Skeletal Muscles - Myocytes	
Skeletal Muscles - Satellite Cells	
Immune Cells	
Blood Vessels	

Explain how three negative feedback processes are used by the body to detect and repair muscle cells after they are damaged in exercise. In your response, be sure to discuss:

- the role of specific specialized cells in the feedback processes.
- what conditions change in the body to bring it out of a stable state, and how the body responds with feedback mechanisms to return it to a stable state.

## Part 3: Asking New Questions

What new questions do you have that can help us make progress towards answering the Module Question, *How does milk help in muscle recovery from soreness and weakness induced by intense exercise*?