

STUDENT GUIDE

EXPLORE 1 LESSON 26



Part 1: Our Motivation

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

--



Part 2: Obtaining Information About Muscle Contraction

Sort the cards provided in the Lesson 26 Weight Lifting Sequence Cards handout to show the sequence of events that happen in muscles as they are contracted to lift a weight. Record the sequence of cards as decided by you and your group.

1.	7.
2.	8.
3.	9.
4.	10.
5.	11.
6.	12.



Based on what you see in the cards, describe how the structure of the specialized muscle cells and specialized nerve cells contribute to the function of the muscle organ in lifting the weight.

--

Watch the video provided by your teacher. Record any new observations you made about the processes occurring in muscles and muscle cells as they lift a weight.

--

Record what you think you still need to figure out about how muscles get sore and weak during exercise.

--



Part 3: Analyzing and Interpreting Data

Review the experiments conducted by scientists and their findings in the two studies on how muscle cells change after exercise. Summarize the methods that they used and the data they collected.

Figure 1	Figure 2
----------	----------

--	--

Compare the methods and findings from the two studies. Are they similar or different?

--

What conclusions can you draw from the data sets about the cause of muscle soreness and weakness? In your response, be sure to discuss how the molecular structure of muscle cells is changed when muscles are sore.

--



Part 4: 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?*

--