

STUDENT GUIDE

ANCHOR LESSON 1



Part 1: Sharing Our Past Experiences

Write or draw the different ways you engage in sports or physical exercise.

- I have PE class twice a week, and I play baseball.
- I lift weights in the morning before school.

Think of your body during and after exercise. Using the box below, use words and/or pictures to describe what it feels like while you exercise and after you exercise (while you are resting and recovering).

During Exercise	After Exercise
<ul style="list-style-type: none"> • Sweaty • High heart rate • Increased temperature • Out of breath • Tired • Muscle Fatigue 	<ul style="list-style-type: none"> • Lowering temperature • Lowering heart rate • Catching breath • Muscle soreness





Part 2: Observing the Anchor Phenomenon

Select two videos from the list your teacher provided. In the space below, record your observations as you watch. Consider these questions:

- Who is in the videos?
- What are they doing?
- What are the main ideas the videos are trying to communicate?

- Professional athletes are working out and drinking milk. The video said milk can aid in athlete recovery.
- Someone in the video is doing something physically demanding, and milk is being promoted.
- The video claimed that milk can increase strength gains for high school athletes.
- The video claimed the ratio of protein to carbs in milk helps with athlete recovery.

What videos did your partner watch? What were the similarities in the videos you watched?

They watched videos that included athletes doing different sports, but all of the videos included the athletes drinking milk to help them recover from their exercise.

What happened in the “Gain a Performance Edge” video? What claims did the scientist make?

Swimmers did an intensive workout, and then one drank water, one a sports drink, and one chocolate milk. Later, they had the three swimmers do another exercise and compared their times. In the video, the swimmer who drank chocolate milk swam 2.1 seconds faster than if they didn't drink milk.



Part 3: Communicating Initial Ideas

Record your current response to our Driving Question, ***How can milk help athletes recover from physical exercise?*** In your response, be sure to describe:

- What changes occur in the body during exercise?
- How does milk help with exercise recovery, including what happens inside the body to do so?

- Lactic acid builds up to make you sore. The milk helps break down lactic acid in the muscles, so you aren't so sore.
- The muscles get sore and break down. Milk contains protein that helps muscles build.
- You lose fluids when you exercise. Milk provides you with hydration, which helps you recover.
- Exercise drains your body's energy. The milk provides you with the energy to recover.

You will prepare an initial presentation to show your current answer to our Driving Question, ***How can milk help athletes recover from physical exercise?*** You may use your response above or revise it based on what you heard from your peers.

Presentation Guidelines:

- Presentation includes multiple methods of communication (i.e., video plus graphics/diagrams, written report plus graphics/diagrams, or video with narration of a slideshow).
- Length requirements:
 - Videos cannot exceed one minute.
 - Written reports cannot exceed two paragraphs.
- Presentation is designed specifically for a chosen audience.
- For now, share only your current ideas. There is no need to do research on the topic. We want the presentation to show what you currently think.

Choose the presentation format you will use and the audience you will design the presentation for:

What presentation format will you choose? Check one or create your own.	<ul style="list-style-type: none"> ● Social media post with narration and images ● PowerPoint/Slide deck presentation with embedded videos and/or images ● Written report with videos and/or images ● Video presentation with narration and/or graphics and images. ● Other: _____
Who is your targeted audience? Check one or create your own.	<ul style="list-style-type: none"> ● Friends my age who exercise. ● Student-athletes at school. ● Adults who exercise. ● Younger children who play and exercise. ● Other: _____

In the space below, prepare your presentation script or written report. Then, deliver and record your presentation.



Milk helps you recover from exercise because it contains nutrients that help you recover. When you exercise, muscles get sore and break down. Milk contains protein that helps muscles build. You also lose fluids when you exercise. Milk provides you with hydration, which helps you recover. Exercise drains your body's energy. The milk provides you with the energy to recover. In all of these ways, milk helps you to recover from exercise.

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Part 4: Sharing Initial Presentation Drafts

Identify similarities and differences between your presentation and your peers' presentations.

Similarities in our Presentations	Differences in our Presentations
<ul style="list-style-type: none"> • We both included hydration as part of our explanation. • We agreed it helps with muscle growth, but we aren't sure how yet. • We both chose a video to make our presentations. 	<ul style="list-style-type: none"> • They said milk gives you energy. • I said milk helps break down lactic acid in our muscles. • They chose a slide presentation.



Part 5: Asking Questions

In the space below, record what questions you have that might help you understand more about how dairy can help athletes recover from physical exercise.

- Why does a body need hydration to recover from physical exercise?
- What is recovery from physical exercise?
- What factors indicate your body has or has not recovered from exercise?
- How or why does eating dairy products give our body energy after physical activity?
- What happens to the body after physical exercise?
- What happens in the body after hydration?
- What does our body lose during exercise, and how do we replenish it?
- Does the amount we sweat impact the amount we need to replenish?
- What processes is the body using for recovery after these physical exercises?
- What body systems are being used?
- Is energy involved? How? Why?
- What makes a person strong enough to do these types of physical activities/exercises?
- Does eating specific foods, like dairy, increase hydration only? Are there other effects?
- Are muscles affected? How? Why?
- What's in milk that helps with recovery?
- How does protein help with recovery?
- What food is best for recovery?
- How much milk do you need for recovery?