

STUDENT GUIDE

EXPLORE 1B LESSON 17



Part 1: Our Motivation

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



Part 2: Planning and Carrying Out an Investigation

Make a claim to predict the relationship between the amount of carbon dioxide exhaled and high-intensity exercise vs. rest.

Plan an investigation to test your claim. Use the Lesson 17 Experiment Design Tips handout as a supplement to help you design your investigation.

Materials Available:

Bromothymol Blue Indicator	2 transparent cups or flasks	Straws	Timer (accuracy to seconds)
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After you have created your first draft of your experimental design, reflect on how well you think it meets the goals of the investigation:

- Will your investigation be able to fully evaluate the claim you made?
- Did you eliminate all confounding variables? What other confounding variables may be present that you did not consider?

Revise your experimental design as necessary to be confident you are achieving the purpose of the investigation and that you are eliminating confounding variables.

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Analyze the data you have collected. Does this data support the claim you made in Part 1? Support your answer with evidence from the data that you gathered.

Be prepared to share the claims you made and the evidence you used to support your claim with your peers. Record similarities and differences in your findings below.



Part 3: Constructing Explanations

Use the findings from your investigation to construct an explanation to the Module Questions, *Why are there so many changes to my body during exercise? How does milk help with recovery from these changes?*