

Guided Lesson Notes

Name: _____ Date: _____

Calorimetry and Specific Heat

Directions: Complete this study guide as you move through the lesson. By taking notes, you are more likely to remember what you are learning. The completed study guide can be used for practice activities and to prepare for quizzes and exams. Be sure to save each study guide so you can access it when you need it.

Essential Vocabulary

As you encounter these scientific terms in the lesson, enter the meaning and an example (or two) for each. You can even draw a picture. If there are other unfamiliar words you find, enter them in the blank spaces provided.

<i>calorimetry</i>	<i>specific heat capacity</i>
<i>conservation of energy</i>	

Calorimetry

1. Define specific heat capacity.

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2. Why does water take a long time to warm up?

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Changing the Temperature

1. What three factors determine how much heat is required to change the temperature of a substance?

a.	
b.	
c.	

2. Write the equation for the heat required to change the temperature of a substance. Then define the variables.

Equation:	
$Q =$	
$m =$	

$c =$	
$\Delta T =$	

$Q = mc\Delta T$ Practice

Choose one of the sample questions and show the work necessary to answer the question. Choose between Iron, Gold, and Unknown.

Problem:	
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Work

Combining Substances

1. Why is it that when two different substances are combined, they experience different changes in temperature?

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2. Write out the law of conservation of energy in words.

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3. Express the law of conservation of energy as a mathematical equation.

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Combining Substances Practice

Choose one of the sample questions and show the work necessary to answer the question. Choose between Silver + Water, Lead + Water, and Gold + Water.

Problem:	
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Work