

**Common Core State Standards for English Language Arts: K-12 Close Reading Task**

**Text grade band placement:**  
6-8

<b>Text</b>	<b>Text Complexity Analysis</b>
<p><b>Title:</b> “Kinetic Theory.”</p> <p><b>Citation/Publication info:</b> <i>Glencoe Physical Science</i>. Glencoe McGrawHill: Ohio, 2002</p> <p><b>Link:</b> <a href="http://www.glencoe.com/sec/science/ose/chemistryca/2005/docs/chap10.pdf">http://www.glencoe.com/sec/science/ose/chemistryca/2005/docs/chap10.pdf</a> (Physical Science. p. 342-347)</p>	<p><b>Quantitative:</b> Lexile: samples range from 1100L-1220L</p>
	<p><b>Qualitative:</b> Some words and sentence structures are simplistic; but syntax of the text includes appropriately complex language skills which aids in the acquisition of conceptual knowledge the student needs for success in more advanced science classes.</p>
	<p><b>Reader and Task:</b>  The self-contained text allows students the opportunity to read and reread deliberately and slowly to probe the meaning of individual words, the order in which the sentences unfold, and the development of ideas resulting in comprehension.</p>

**ELA/Literacy Common Core Standards addressed by task**

[CCSS.ELA-Literacy.RST.6-8.1](#) Cite specific textual evidence to support analysis of science and technical texts.

[CCSS.ELA-Literacy.RST.6-8.2](#) Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.

[CCSS.ELA-Literacy.WHST.6-8.2](#) Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.

[CCSS.ELA-Literacy.WHST.6-8.4](#) Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

[CCSS.ELA-Literacy.WHST.6-8.9](#) Draw evidence from informational texts to support analysis reflection, and research.

**What key insights should students take from this text?**

1. Explain the kinetic theory of matter and its impact on the behavior of matter.
2. Describe the molecular movement of the four states of matter.
3. Differentiate the four states of matter in terms of energy, properties, and molecule arrangement.
4. Compare and contrast heat of fusion and heat of vaporization
5. Understand the relationship between thermal expansion and the kinetic theory of matter.

### Text-Dependent Questions

1. What examples does the author provide to help the reader visualize the theory of kinetic energy?
2. The author asks the question, “how are kinetic energy and temperature related?” Based on your reading, how would you answer this question?
3. Locate the paragraph titled “boiling point.” Read it again, silently. Now answer this question: How does external pressure affect the boiling point of a liquid? Write down your thoughts, then turn to your partner to share your answer. (Allow 3-4 minutes and discuss with the group.)
4. According to the text, what is unique about plasma? Identify the examples of plasma given in your book. Now that we have read the information, can you think of some additional examples of plasma?

Writing Mode	Writing Prompt
Informative/explanatory	The kinetic theory of matter influences molecular movement. Citing evidence from the text, use the kinetic theory of matter to explain the behavior of the three common states of matter. Be precise in your explanation while comparing and contrasting properties, particle arrangement, and particle movement. Include an explanation about the relationship between the kinetic theory and thermal expansion.

#### **Scaffolding and support for special education students, English language learners, and struggling readers:**

Instructional accommodations to assist students with disabilities might include changes in materials or procedures. Paired reading of the literature may be used as part of the “re- reading” process. Extended discussions in small groups might occur to reinforce the literature. The writing prompt may be broken into smaller steps and teacher guided. Whole-group writing might occur to assist struggling learners. Some students may be given a pre-written essay with words or sentences missing that can be completed with the assistance of a word bank. Another approach could be to reduce the amount of writing required by shortening the prompt. Assistive technology devices may be necessary for some students. Others may benefit from partnering with another student to collaborate on completing the writing prompt.

#### **How this task supports the content standards for relevant subject area courses in this grade band**

This task would be appropriate for a grade 6 science course. It supports the following standards:

GLE 0607.10.1          Compare and contrast the three forms of potential energy.

SPI 0607.10.2

Interpret the relationship between potential and kinetic energy.