

The Common Core English Language Arts Standards (CCELA)

CHAPTER 1, LESSON 1 – MOLECULES MATTER

Reading Standards for Literacy in Science and Technical Subjects 6-8

LITERACY.RST.6-8.3

Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

LITERACY.RST.6-8.4

Determine the meaning of symbols, key terms and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6-8 texts and topics.

LITERACY.RST.6-8.7

Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).

Students use the Activity Sheet to read and follow a multistep procedure to discover whether water molecules tend to stay together or come apart. Students read the questions and information on the Activity Sheet and apply them to their observations to learn the meaning of words related to atoms, molecules, and processes at the molecular level. Students also integrate information from text with molecular models to improve their understanding.

Writing Standards for Literacy in Science and Technical Subjects 6-8

LITERACY.WHST.6-8.1

Write arguments focused on discipline-specific content

- a. Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim (s) from alternate or opposing claims, and organize the reasons and evidence logically.
- b. Support claim(s) with logical reasoning and relevant accurate data and evidence that demonstrate an understanding of the topic or text using credible sources.

- c. Use words, phrases, and clauses to create cohesion and clarify the relationship among claim(s), counterclaims, reasons, and evidence.
- d. Establish and maintain a formal style.
- e. Provide a concluding statement or section that follows from and supports the argument presented.

Students use the Activity Sheet to write answers to questions about their observations. Students also describe how the molecular model illustrations and animations from the lesson relate to their observations. Students apply reasoning from the molecular models to evidence from their observations to make and support a claim that answers the Question to Investigate about why water molecules tend to stay together.

The Common Core English Language Arts Standards (CCELA)

CHAPTER 1, LESSON 2 – MOLECULES IN MOTION

Reading Standards for Literacy in Science and Technical Subjects 6-8

LITERACY.RST.6-8.3

Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

LITERACY.RST.6-8.4

Determine the meaning of symbols, key terms and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6-8 texts and topics.

LITERACY.RST.6-8.7

Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).

Students use the Activity Sheet to read and follow a multistep procedure to discover whether the speed of water molecules is different in hot or cold water. Students read the questions and information on the Activity Sheet and apply them to their observations to learn the meaning of words related to atoms, molecules, and processes at the molecular level. Students also integrate information from text with molecular models to improve their understanding.

Writing Standards for Literacy in Science and Technical Subjects 6-8

LITERACY.WHST.6-8.1

Write arguments focused on discipline-specific content

- a. Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim (s) from alternate or opposing claims, and organize the reasons and evidence logically.
- b. Support claim(s) with logical reasoning and relevant accurate data and evidence that demonstrate an understanding of the topic or text using credible sources.

- c. Use words, phrases, and clauses to create cohesion and clarify the relationship among claim(s), counterclaims, reasons, and evidence.
- d. Establish and maintain a formal style.
- e. Provide a concluding statement or section that follows from and supports the argument presented.

Students use the Activity Sheet to write answers to questions about their observations. Students also describe how the molecular model illustrations and animations from the lesson relate to their observations. Students apply reasoning from the molecular models to evidence from their observations to make and support a claim that answers the Question to Investigate about why water molecules move faster when heated and slower when cooled.

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CHAPTER 1, LESSON 3 – THE UPS AND DOWNS OF THERMOMETERS

Reading Standards for Literacy in Science and Technical Subjects 6-8

LITERACY.RST.6-8.3

Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

LITERACY.RST.6-8.4

Determine the meaning of symbols, key terms and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6-8 texts and topics.

LITERACY.RST.6-8.7

Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).

Students use the Activity Sheet to read and follow a multistep procedure to discover what makes the liquid in a thermometer go up and down. Students read the questions and information on the Activity Sheet and apply them to their observations to learn the meaning of words related to atoms, molecules, and processes at the molecular level. Students also integrate information from text with molecular models to improve their understanding.

Writing Standards for Literacy in Science and Technical Subjects 6-8

LITERACY.WHST.6-8.1

Write arguments focused on discipline-specific content

- a. Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim (s) from alternate or opposing claims, and organize the reasons and evidence logically.
- b. Support claim(s) with logical reasoning and relevant accurate data and evidence that demonstrate an understanding of the topic or text using credible sources.

- c. Use words, phrases, and clauses to create cohesion and clarify the relationship among claim(s), counterclaims, reasons, and evidence.
- d. Establish and maintain a formal style.
- e. Provide a concluding statement or section that follows from and supports the argument presented.

Students use the Activity Sheet to write answers to questions about their observations. Students also describe how the molecular model illustrations and animations from the lesson relate to their observations. Students apply reasoning from the molecular models to evidence from their observations to make and support a claim that answers the Question to Investigate about what makes the liquid in a thermometer go up and down.

The Common Core English Language Arts Standards (CCELA)

CHAPTER 1, LESSON 4 – MOVING MOLECULES IN A SOLID

Reading Standards for Literacy in Science and Technical Subjects 6-8

LITERACY.RST.6-8.3

Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

LITERACY.RST.6-8.4

Determine the meaning of symbols, key terms and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6-8 texts and topics.

LITERACY.RST.6-8.7

Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).

Students use the Activity Sheet to read and follow a multistep procedure to discover how heating and cooling affect the atoms of a solid. Students read the questions and information on the Activity Sheet and apply them to their observations to learn the meaning of words related to atoms, molecules, and processes at the molecular level. Students also integrate information from text with molecular models to improve their understanding.

Writing Standards for Literacy in Science and Technical Subjects 6-8

LITERACY.WHST.6-8.1

Write arguments focused on discipline-specific content

- a. Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim (s) from alternate or opposing claims, and organize the reasons and evidence logically.
- b. Support claim(s) with logical reasoning and relevant accurate data and evidence that demonstrate an understanding of the topic or text using credible sources.
- c. Use words, phrases, and clauses to create cohesion and clarify the relationship

among claim(s), counterclaims, reasons, and evidence.

d. Establish and maintain a formal style.

e. Provide a concluding statement or section that follows from and supports the argument presented.

Students use the Activity Sheet to write answers to questions about their observations. Students also describe how the molecular model illustrations and animations from the lesson relate to their observations. Students apply reasoning from the molecular models to evidence from their observations to make and support a claim that answers the Question to Investigate about how heating and cooling affect the atoms of a solid.

The Common Core English Language Arts Standards (CCELA)

CHAPTER 1, LESSON 5 – AIR, IT’S REALLY THERE

Reading Standards for Literacy in Science and Technical Subjects 6-8

LITERACY.RST.6-8.3

Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

LITERACY.RST.6-8.4

Determine the meaning of symbols, key terms and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6-8 texts and topics.

LITERACY.RST.6-8.7

Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).

Students use the Activity Sheet to read and follow a multistep procedure to discover how heating and cooling affect a gas. Students read the questions and information on the Activity Sheet and apply them to their observations to learn the meaning of words related to atoms, molecules, and processes at the molecular level. Students also integrate information from text with molecular models to improve their understanding.

Writing Standards for Literacy in Science and Technical Subjects 6-8

LITERACY.WHST.6-8.1

Write arguments focused on discipline-specific content

- a. Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim (s) from alternate or opposing claims, and organize the reasons and evidence logically.
- b. Support claim(s) with logical reasoning and relevant accurate data and evidence that demonstrate an understanding of the topic or text using credible sources.
- c. Use words, phrases, and clauses to create cohesion and clarify the relationship

among claim(s), counterclaims, reasons, and evidence.

d. Establish and maintain a formal style.

e. Provide a concluding statement or section that follows from and supports the argument presented.

Students use the Activity Sheet to write answers to questions about their observations. Students also describe how the molecular model illustrations and animations from the lesson relate to their observations. Students apply reasoning from the molecular models to evidence from their observations to make and support a claim that answers the Question to Investigate about how heating and cooling affect a gas.