### Cluster: Key Ideas and Details

**CCR Anchor Standard #1** Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

<table>
<thead>
<tr>
<th>Grades 9-10</th>
<th>Grades 11-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>RST 9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.</td>
<td>RST 11-12 Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.</td>
</tr>
</tbody>
</table>

#### Essential Skills and Knowledge

- Demonstrate the behaviors of a strategic reader when reading a science or technical text.
- Analyze text clues that affect meaning.
- Identify evidence that supports the author's purpose.
- Evaluate textual evidence for completeness and relevance.
- Participate actively and appropriately in discussions about informational text.
- Interpret, explain, and apply appropriate academic and/or domain-specific vocabulary when responding and discussing informational text. (See CCSS L.9-10.4 & L.9-10.6)
- Use knowledge of language and its conventions when speaking and writing. (See CCSS L.9-10.1)
- See also MD SLM 2.0 & 3.0, as needed

- Demonstrate the behaviors of a strategic reader when reading science and technical texts.
- Identify the evidence in the text that supports the author's purpose.
- Evaluate available evidence for thoroughness, completeness, accuracy and relevance.
- Analyze evidence and explain any inconsistencies or ambiguities between or among evidence presented in text.
- Participate actively and appropriately in discussions about informational text.
- Interpret, explain, and apply appropriate academic and/or domain-specific vocabulary when responding and discussing informational text. (See CCSS L.11-12.4 & L.11-12.6)
- Use knowledge of language and its conventions when speaking and writing. (See CCSS L.11-12.1)
- See also MD SLM 2.0 & 3.0, as needed.
### CCR Anchor Standard #2
Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

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<tr>
<td>RST.9-10.2 Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.</td>
<td>RST.11-12.2 Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.</td>
</tr>
</tbody>
</table>

**Essential Skills and Knowledge**

- Analyze the key ideas that contribute to the development of a complex process, phenomenon, or concept presented in the text.
- Synthesize evidence from the text to determine the central idea or conclusion.
- Objectively summarize the scientific or technical text, including the appropriate key ideas, processes, and/or phenomenon.

### CCR Anchor Standard #3
Analyze how and why individuals, events, or ideas develop and interact over the course of a text.

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<tr>
<td>RST.9-10.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.</td>
<td>RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.</td>
</tr>
</tbody>
</table>

**Essential Skills and Knowledge**

- Analyze and explain the text structure and features of a complex multi-step scientific or technical procedure and how it contributes to the purpose of the text.
- Evaluate how the use of domain specific vocabulary, materials, specific scientific tools, or equipment in the text that contributes to the procedure.
- Identify special directions or exceptions in the text important/critical to the procedure.
- Implement the procedure.
## Cluster: Craft and Structure

### CCR Anchor Standard #4
Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.

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<tr>
<td>RST. 9-10.4 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 9-10 texts and topics.</td>
<td>RST.11-12.4 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 11-12 texts and topics.</td>
</tr>
</tbody>
</table>

### Essential Skills and Knowledge

- **Grades 9-10**
  - Analyze the meaning, use, and effect of scientific and technical vocabulary, symbols, and other domain specific-words or phrases as it contributes to comprehension of text.
  - Use common grade appropriate Greek and Latin affixes and roots as clues to the meaning of a word. (See CCSS L.8.4.b)
  - Interpret, explain, and apply appropriate academic and/or domain-specific vocabulary when responding and discussing informational text. (See 9-10 CCSS L.4.& L.6).

- **Grades 11-12**
  - Analyze the meaning, use, and effect of science and technical vocabulary, symbols, and other domain specific-words or phrases as it contributes to the meaning of the text.
  - Interpret, explain, and apply appropriate academic and/or domain-specific vocabulary when responding and discussing science or technical text. (See CCSS L 9-10.4 & L.9-10.6)

### CCR Anchor Standard #5
Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.

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<tr>
<td>RST.9-10.5 Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, frictions, reaction force, energy).</td>
<td>RST.11-12.5 Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.</td>
</tr>
</tbody>
</table>

### Essential Skills and Knowledge

- **Grades 9-10**
  - Identify and analyze the text structure used to organize science or technical text (e.g., sequentially/chronologically, main ideas and supporting details, cause and effect, compare and contrast, problem and solution).
  - Apply an understanding of text features in science or technical text (e.g., print features, graphic aids, informational aids, online features, etc.) to facilitate an understanding of the text.
  - Determine the author’s purpose for the identified text. (See CCSS RI.8.6)

- **Grades 11-12**
  - Analyze the relationship among certain major sections, categories, or hierarchies within the text as a whole.
  - Analyze and explain how an author deliberately chooses and uses words and text structures to develop and refine ideas or information.
  - Explain how the relationship among the major sections, categories, or hierarchies contributes to the development of the idea or concept presented within the text.
### Maryland Common Core State Curriculum Framework

**Reading Standards for Literacy in Science and Technical Subjects**

**Grades 9-12**

<table>
<thead>
<tr>
<th>CCR Anchor Standard #6</th>
<th>Assess how point of view or purpose shapes the content and style of a text.</th>
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</tr>
<tr>
<td>RST.9-10.6</td>
<td>Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.</td>
</tr>
<tr>
<td>RST.11-12.6</td>
<td>Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.</td>
</tr>
</tbody>
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**Essential Skills and Knowledge**

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<th><strong>Grades 9-10</strong></th>
<th><strong>Essential Skills and Knowledge</strong></th>
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<tr>
<td>Identify and explain the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.</td>
<td>Identify and examine the relationships between and among ideas throughout the text and how they contribute to meaning.</td>
</tr>
<tr>
<td>Analyze and explain the structure of an explanation, procedure, or experiment and how it contributes to meaning and/or purpose of the text.</td>
<td>Evaluate the text for completeness and relevance.</td>
</tr>
<tr>
<td>Determine and examine the relationships between and among ideas throughout the text and how they contribute to meaning.</td>
<td>Analyze and explain any inconsistencies, ambiguities, or gaps among information presented in text.</td>
</tr>
<tr>
<td>Evaluate the effectiveness of the text to address the author's purpose.</td>
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</tbody>
</table>
## Cluster: Integration of Knowledge and Ideas

**CCR Anchor Standard #7** Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words.

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<tr>
<td><strong>RST.9-10.7</strong> Translate quantitative or technical information expressed in words into visual form (e.g., a table or a chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</td>
<td><strong>RST.11-12.7</strong> Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.</td>
</tr>
</tbody>
</table>

### Essential Skills and Knowledge

#### Translate quantitative or technical information in text to a visual
- Identify the author’s purpose.
- Identify the key numerical, scientific, or technical terms within the text that describes the quantitative or technical information (e.g., units of measurement).
- Identify and analyze cue words and phrases that describe the informational relationships expressed (less than, greater than, increases, decreases, equal to).
- Choose, construct, and complete a graphic organizer (chart, table, graph, and flow chart) that most appropriately visually represents the relationship or processes described in the text and the author’s purpose.

#### Translate information visually or mathematically into words.
- Identify the author’s purpose.
- Identify the mathematical relationships represented by operational symbols (e.g., +, -, \(\times\)), mathematic symbols (e.g., \(\cdot\), \(=\), \(<\), \(>\)), and/or technology/flowchart symbols (e.g., \(\square\), \(\bigtriangleup\), \(\bigtriangledown\), \(\nabla\)).
- Analyze the author’s use of numbers and symbols to represent key ideas, concepts, or processes.
- Summarize the information expressed visually by the author into text.

- Analyze print, non-print and digital text for explicit details that are relevant to addressing a question or solving a problem. (See also MD Standard SLM 4.0)
- Compare, draw conclusions, and connect significant details and ideas between and among different media formats.
- Evaluate information from multiple sources of print, non-print, and digital texts, for accuracy, relevance, reliability and validity.
- Integrate information from multiple sources of print, non-print, and digital texts to address a question or solve a problem. (See CCSS W.11-12.6, W.11-12.7, W.11-12.8, W.11-12.9b, SL.11-12.2)
<table>
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<tr>
<th>CCR Anchor Standard #8</th>
<th>Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.</th>
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<td>RST.9-10.8</td>
<td>Assess the extent to which the reasoning and evidence in a text supports the author’s claim or a recommendation for solving a scientific or technical problem.</td>
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<tr>
<td>RST.11-12.8</td>
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### Essential Skills and Knowledge

- Identify the author's claim or recommendation and supporting evidence.
- Analyze and evaluate connections among evidence, inferences, and claims or recommendations.
- Analyze the completeness, relevance, and accuracy of evidence.
- Evaluate the extent to which the evidence supports the author's claim or recommendation.
- See also MD Standard SLM 4.0.

<table>
<thead>
<tr>
<th>CCR Anchor Standard #9</th>
<th>Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.</th>
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<tr>
<td>RST.9-10.9</td>
<td>Compare and contrast findings presented in a text to those from other sources (including their own experiment(s), noting when the findings support or contradict previous explanations or accounts).</td>
</tr>
<tr>
<td>RST.11-12.9</td>
<td>Synthesize information from a range of sources (e.g., text, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible</td>
</tr>
</tbody>
</table>

### Essential Skills and Knowledge

- Identify the main points and key details in a science or technical text and those found in other sources (e.g., simulations, videos, multimedia sources, student experiments) on the same topic.
- Compare and contrast information from different sources to identify common areas of support or contradictions.
- Synthesize information to represent a logical understanding of the topic.

- Identify the main points and key details in a science or technical text to those found in other sources (e.g., text, experiments, and simulations) on the same topic.
- Compare, contrast, and analyze information from the different sources to identify common areas of support and/or contradiction
- Seek information from other sources to resolve conflicting information.
- Synthesize information to support understanding of text.
## Cluster: Range of Reading and Level of Text Complexity

<table>
<thead>
<tr>
<th>CCR Anchor Standard #10</th>
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<tr>
<td><strong>RST.9-10.10</strong></td>
<td>By the end of grade 10, read and comprehend Science/technical texts in the grades 9-10 text complexity band independently and proficiently.</td>
<td><strong>RST.11-12.10</strong></td>
</tr>
</tbody>
</table>

### Essential Skills and Knowledge

- **Demonstrate understanding of a wide range of sufficiently complex science and technical nonfiction.** (See also MD SLM 6.0)
  - Comprehend texts of steadily increasing complexity, with scaffolding as needed.
  - As an emerging adult reader, set personal reading goals to self select and explore texts of different disciplines and increasing complexity.
- **Participate actively and appropriately in discussions about informational text.**
- **Interpret, explain, and apply appropriate academic and/or domain-specific vocabulary when responding and discussing informational text.** (See 9-10 CCSS L.4 & L.6)
- **Use knowledge of language and its conventions when speaking and writing.** (See 9-10 CCSS L.1)

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  - Comprehend texts of steadily increasing complexity.
  - As an emerging adult reader, set personal reading goals to self select and explore texts of different genres and increasing complexity.
- **Participate actively and appropriately in discussions about informational text.**
- **Interpret, explain, and apply appropriate academic and/or domain-specific vocabulary when responding and discussing informational text.** (See 9-10 CCSS L.4 & L.6)
- **Use knowledge of language and its conventions when speaking and writing.** (See 9-10 CCSS L.1)