

**What are Literacies within the Disciplines?** The following lists for each of the major content areas, while not comprehensive, can act as starting points through which communities of teachers can begin to think in terms of disciplinary literacy (Lent, 2016).

	<b>Read</b>	<b>Write</b>	<b>Think</b>
<b>Science</b>	<p><i>When scientists read, they</i></p> <ul style="list-style-type: none"> <li>• Ask "Why?" more than "What?"</li> <li>• Interpret data, charts, illustrations</li> <li>• Seek to understand concepts and words</li> <li>• Determine validity of sources and quality of evidence</li> <li>• Pay attention to details</li> </ul>	<p><i>When scientists write, they</i></p> <ul style="list-style-type: none"> <li>• Use precise vocabulary</li> <li>• Compose in phrases, bullets, graphs, or sketches</li> <li>• Use passive voice</li> <li>• Favor exactness over craft or elaboration</li> <li>• Communicate in a systematic form</li> </ul>	<p><i>When scientists think, they</i></p> <ul style="list-style-type: none"> <li>• Tap into curiosity to create questions</li> <li>• Rely on prior knowledge or research</li> <li>• Consider new hypotheses or evidence</li> <li>• Propose explanations</li> <li>• Create solutions</li> </ul>
<b>History</b>	<p><i>When historians read, they</i></p> <ul style="list-style-type: none"> <li>• Interpret primary and secondary sources</li> <li>• Identify bias</li> <li>• Think sequentially</li> <li>• Compare and contrast events, accounts, documents and visuals</li> <li>• Determine meaning of words within context</li> </ul>	<p><i>When historians write, they</i></p> <ul style="list-style-type: none"> <li>• Create timelines with accompanying narratives</li> <li>• Synthesize info/evidence from multiple sources</li> <li>• Emphasize coherent organization of ideas</li> <li>• Grapple with multiple ideas and large quantities of information</li> <li>• Create essays based on argumentative principles</li> </ul>	<p><i>When historians think, they</i></p> <ul style="list-style-type: none"> <li>• Create narratives</li> <li>• Rely on valid primary and secondary sources to guide their thinking</li> <li>• Compare and contrast or ponder causes and effects</li> <li>• Consider big ideas or inquiries across long periods of time</li> <li>• Recognize bias</li> </ul>
<b>Math</b>	<p><i>When mathematicians read, they</i></p> <ul style="list-style-type: none"> <li>• Use information to piece together a solution</li> <li>• Look for patterns and relationships</li> <li>• Decipher symbols and abstract ideas</li> <li>• Ask questions</li> <li>• Apply mathematical reasoning</li> </ul>	<p><i>When Mathematicians write, they</i></p> <ul style="list-style-type: none"> <li>• Explain, justify, describe, estimate or analyze</li> <li>• Favor calculations over words</li> <li>• Use precise vocabulary</li> <li>• Include reasons and examples</li> <li>• Utilize real-word situations</li> </ul>	<p><i>When Mathematicians think, they</i></p> <ul style="list-style-type: none"> <li>• Consider patterns</li> <li>• Utilize previous understandings</li> <li>• Find connections</li> <li>• Estimate, generalize, and find exceptions</li> <li>• Employ mathematical principles</li> </ul>
<b>English Language Arts</b>	<p><i>When students of English read, they</i></p> <ul style="list-style-type: none"> <li>• Understand how figurative language works</li> <li>• Find underlying messages that evolve as theme</li> <li>• Assume a skeptical stance</li> <li>• Pay attention to new vocabulary or words used in new ways</li> <li>• Summarize and synthesize</li> </ul>	<p><i>When students of English write, they</i></p> <ul style="list-style-type: none"> <li>• Engage in a process that includes drafting, revising, and editing</li> <li>• Use mentor texts to aid their writing craft</li> <li>• Pay attention to organization, details, elaboration and voice</li> <li>• Rely on the feedback of others</li> <li>• Avoid formulaic writing</li> </ul>	<p><i>When students of English think, they</i></p> <ul style="list-style-type: none"> <li>• Reflect on multiple texts</li> <li>• Ask questions of the author</li> <li>• Consider research or others ideas</li> <li>• Discuss ideas and themes</li> <li>• Argue both sides of a point</li> </ul>