



## Key Ideas from Theory and Research

### Standard 3: Students Engage in Meaning-Making through Discourse and other Strategies

*Directions: Read the excerpts from the research base for Standard 3.  
As you read each paragraph, highlight key words.*

- To engage students in active meaning making, students need to participate in discourse patterns in all domains, both orally and in written format (e.g., Jewitt, Kress, Ogborn, & Tsatsarelis, 2000). These discourse patterns include developing arguments, explaining, critiquing, using logic, and giving evidence to support or refute a claim (e.g., Halliday & Martin, 1993).
- Students' use of meaningful academic language has been shown to be much more prevalent in classrooms when teachers establish clear learning structures aligned with clear learning expectations and provide appropriate scaffolding for students (Quinn, Lee, & Valdes, 2012).
- Being able to understand and create representations is related to and may affect complex problem solving, transfer of knowledge to novel situations, and understanding of higher-level concepts (e.g., Greeno & Hall, 1997; Skemp, 2012).
- When students are engaged in learning processes which are driven by discourse about objects and ideas, they more effectively progress through increasingly complex states of conceptual understanding (e.g., moving from observations to modeling observations to then explaining and defending models) (National Research Council, 2011; Quinn, Lee, & Valdes, 2012).
- In science, for example, when students can spontaneously generate analogies for the scientific phenomenon they are learning, particularly in the process of overcoming misconceptions, their understanding greatly improves (e.g., Clement, 1989; Wong, 1993).
- Collaboration with peers encourages motivation and cognitive engagement. Collaboration involves working with others to obtain information, to share and discuss ideas and interpretations, and to receive feedback (Blemenfeld, Kempler, & Krajcik, 2006; Wentzel, 1997).