

Figure 5.3 Assessment of Writing in Science

Levels of Achievement	Not Yet Proficient	Nearly Proficient	Proficient	Highly Proficient
Written Language				
Uses academic and technical vocabulary (e.g., high pressure, low pressure, air pressure at sea level [14.7 psi], precipitation, fair weather)				
Makes connections between content ideas (e.g., low-pressure systems are associated with clouds and precipitation; high-pressure systems are associated with fair weather and clear skies; the demo showed a change in air pressure in the jar—from higher pressure to lower pressure after the paper was burned. Higher pressure outside the jar pushed the egg into the jar. Air moves from areas of high pressure to areas of low pressure, thus causing winds).				
Uses appropriate grammar, including cause-and-effect text structures				
Presents a logical flow of ideas, includes explanation of demo and connection to wind				

data is dependent upon the quality of the assessment itself. For example, the common multiple-choice assessment, while convenient, quick, and easy to score, is typically used to assess nothing more than rote memorization of basic science facts (Stern & Ahlgren, 2002). In such a case, the data would provide information only about basic content knowledge. In an example of this, Stern and Ahlgren (2002) note the following:

Regarding the topic “processes that shape the Earth,” students are asked many questions that require the knowledge of excruciating details related to the mechanisms of individual processes that shape