

Text Complexity Analysis Template

Text complexity analysis			
Created by:	Kim Speight	Event/Date:	TeachFestCT/July 29, 2014
Text and Author	NASA/Jet Propulsion Laboratory. "Cassini spacecraft reveals 101 geysers and more on icy Saturn moon." ScienceDaily. ScienceDaily, 28 July 2014.	Where to Access Text	http://www.sciencedaily.com/releases/2014/07/140728191530.htm
Text Description			
<p>Scientists using mission data from NASA's Cassini spacecraft have identified 101 distinct geysers erupting on Saturn's icy moon Enceladus. Their analysis suggests it is possible for liquid water to reach from the moon's underground sea all the way to its surface.</p>			
Quantitative			
Lexile and Grade Level	Lexile = 1390L Gr. 11-CCR (Grade 8 Content)	Text Length	770 Words
Qualitative			
Meaning/Central Ideas		Text Structure/Organization	
<p>The article addresses multiple science concepts, which will be learned throughout the year, to explain why it is possible that the geysers that have been identified on Saturn's icy moon Enceladus, were created by liquid water reaching from the moon's underground sea all the way to its surface. The reader must connect and apply scientific principles throughout the article to understand the underlying explanation about what actually causes the geysers the meaning of the text is very complex.</p>		<p>Connections between an extensive range of scientific processes are deep. Organization is intricate and concepts are discipline-specific. The only graphic and caption which are included do not help the reader understand the main idea of the article. There are no headings or bold words. Each section of the text does relate in a logical progression.</p>	
Prior Knowledge Demands		Language Features	
<p>The prior knowledge demands of this article are extensive. Comprehension and application of multiple discipline-specific concepts learned throughout the year include geysers, ice particles, water vapor, land fractures, hot spots, friction, thermal radiation, and tides.</p> <p>Teachers may also want to present the information explaining what the Cassini spacecraft is which is located at the end of the article, at the beginning of the lesson.</p>		<p>Vocabulary is very subject specific. There are many tier three words. Ideas are in paragraphs, there are no headings, bullets or bold words.</p>	

Potential Reader/Task Challenges

The main idea, that there are one hundred and one geysers on Saturn's moon Enceladus, is clearly stated; but the science concepts explaining how those geysers are created, which support the main idea, may be difficult to connect for students lacking prior knowledge. Therefore, this article will be used as a summative assessment at the end of the school year in eighth grade physical science. Some students may have recall of the science concepts building to the main idea but may not be able to apply those concepts to understand the true meaning of the article therefore small group discussion will be important.

Big Takeaway

This article will allow the students to apply their prior knowledge to establish relationships between scientific concepts to understand how those processes work together to explain a bigger event. Using this as a summative assessment would allow the students to understand why they are learning the concepts we teach them and hopefully see the bigger picture in science.

Vocabulary Analysis Template

	Words that demand less teaching time (i.e. the definition is singular and concrete)	Words that demand more teaching time (i.e. words with multiple meanings and/or that are part of a word family)
Words that can be determined in context	<p>Renowned (tier 2) Prominent (tier 2) Plausible (tier 2) Correlated (tier 2) Employed (tier 2) Coincided (tier 2)</p>	
Words that cannot be determined in context	<p>Geyser (tier 3) Fractures (tier 3) Hot spots (tier 3) Triangulation (tier 3) Thermal emission (tier 3) Thermal radiation (tier 3) Tidal stresses (tier 3) Frictional heating (tier 3) Condensation of vapor (tier 3) Plume (tier 3) Modulates (tier 3)</p>	