



Science Exemplary Text Student Handout

Mars is very cold and very dry. Scattered across the surface are many giant volcanoes. Lava covers much of the land.

In Mars' northern half, or hemisphere, is a huge raised area. It is about 2,500 miles wide. Astronomers call this the Great Tharsis Bulge.

There are four mammoth volcanoes on the Great Tharsis Bulge. The largest one is Mount Olympus, or Olympus Mons. It is the biggest mountain on Mars. Some think it may be the largest mountain in the entire solar system.

Mount Olympus is 15 miles high. At its peak is a 50 mile wide basin. Its base is 375 miles across. That's nearly as big as the state of Texas!

Mauna Loa, in Hawaii, is the largest volcano on earth. Yet, compared to Mount Olympus, Mauna Loa looks like a little hill. The Hawaiian volcano is only 5½ miles high. Its base, on the bottom of the Pacific Ocean, is just 124 miles wide.

Each of the three other volcanoes in the Great Tharsis Bulge are over 10 miles high. They are named Arsia Mons, Pavonis Mons, and Ascræus Mons.

Media Text

NASA's illustrated fact sheet on Mars:

http://www.nasa.gov/worldbook/mars_worldbook.html

Berger, Melvin. (1992). *Discovering Mars: The Amazing Story of the Red Planet*. New York: Scholastic.

This is an example of exemplary text found in *Common Core Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects: Appendix B Text Exemplars and Sample Performance Tasks*. Retrieved from http://www.corestandards.org/assets/Appendix_B.pdf

Science Exemplary Text Teacher Resource

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EFL 3

Word Count 185

Teacher introduces the text with minimal commentary and students read it independently. Teacher then reads passage aloud. Give a brief definition to words students would likely not be able to define from context (underlined in text). Teacher guides the students through a series of text-dependent questions. Complete the performance task as a cumulative evaluation of the close-reading.

Text-Dependent Questions

1. What is the main idea of this passage?
2. Are the volcanoes on Mars smaller than the ones on Earth? Note where in the text you got your answer.
3. What might be the biggest mountain in the solar system and where is it?
4. Explain how Mars is different than Earth using what you see in this text.
5. Where is the Great Tharsis Bulge and what can you find there?

Performance Tasks for Informational Texts

Students explain how Melvin Berger uses reasons and evidence in his book *Discovering Mars: The Amazing Story of the Red Planet* to support particular points regarding the topology of the planet. [RI.4.8]

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