

**Surface Geology of Mars**  
**2005 Science Olympiad Exam**  
**Compute This!**  
**Answer Key**

**Note:** There are many NASA sites where answers to each of the questions may be found.

1. Which Martian rover explored Gusev Crater? **Spirit**  
<http://marsrovers.jpl.nasa.gov/gallery/press/spirit/20041007a.html>
2. Why are planetary geologists interested in regions of the Martian surface where mineral deposits of hematite may be found? **Hematite is associated with water, one of the main objectives of the rover missions.**  
<http://marsrovers.jpl.nasa.gov/overview/>
3. What information will the Alpha Particle X-Ray Spectrometers mounted onto the rovers provide? An **analysis of the abundances of elements that make up rocks and soils** <http://marsrovers.jpl.nasa.gov/overview/>

Credit: This exam was created and submitted by Liz Jasperse. We wish to thank Liz for her willingness to share this exam and to invite others to submit exams for posting on The Wright Center at Tufts University:

[http://www.tufts.edu/as/wright\\_center/fellows/sci\\_olympiad/sci\\_olympiad.html](http://www.tufts.edu/as/wright_center/fellows/sci_olympiad/sci_olympiad.html)

Your may submit your exams to Linder Winter at [LWothworld@aol.com](mailto:LWothworld@aol.com) Thank you.