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Mission to Mars Related Questions

- *What materials exist on Mars?*
- *How can we identify and use the resources on Mars to help to support the needs of a human colony on the planet?*

Graded Assignment 1 :

1. Read the article “ NASA’s Curiosity Rover Finds Water In Martian Soil”.
2. Answer the related questions below. **Make sure to answer in complete sentences.**
 - a. Questions with a * are questions that can be answered directly from the text.
 - b. All other questions will require that you apply the content we have learned in this unit in order to answer them.

Question	Answer
A.* What useful resource did Curiosity find on Mars?	
B. * How much water is contained in each cubic foot of Martian soil?	

<p>C. * Since the water molecules are mixed with other minerals in the soil, describe what Laurie Leshin says about how the water will be removed from the soil.</p>	
<p>D. What physical property is used to separate the water in the procedure described above?</p>	
<p>E.* How much water can be separated from 1 cubic foot of dirt?</p>	
<p>F.* What other compounds were found using Curiosity's Sample Analysis at Mars (SAM) instrument?</p>	

<p>G. How do the compounds that SAM found have potential use for humans on Mars?</p>	
<p>H. What two physical properties does SAM use to separate and detect water and other materials?</p>	
<p>I. * Where are the only direct sources of water found so far on Mars?</p>	
<p>J. What phase of matter is the direct source of water found on Mars?</p>	

<p>K. Can water be physically separated into hydrogen and oxygen? Explain your answer.</p>	
<p>L. * What toxic type of chemical was also found in the soil that was analyzed and what does it do to humans?</p>	
<p>M. Why is it important for people to know about hazards on Mars?</p>	

As time allows, visit the link to a simulation on how SAM analyzes samples.

<http://ssed.gsfc.nasa.gov/sam/adventure/>