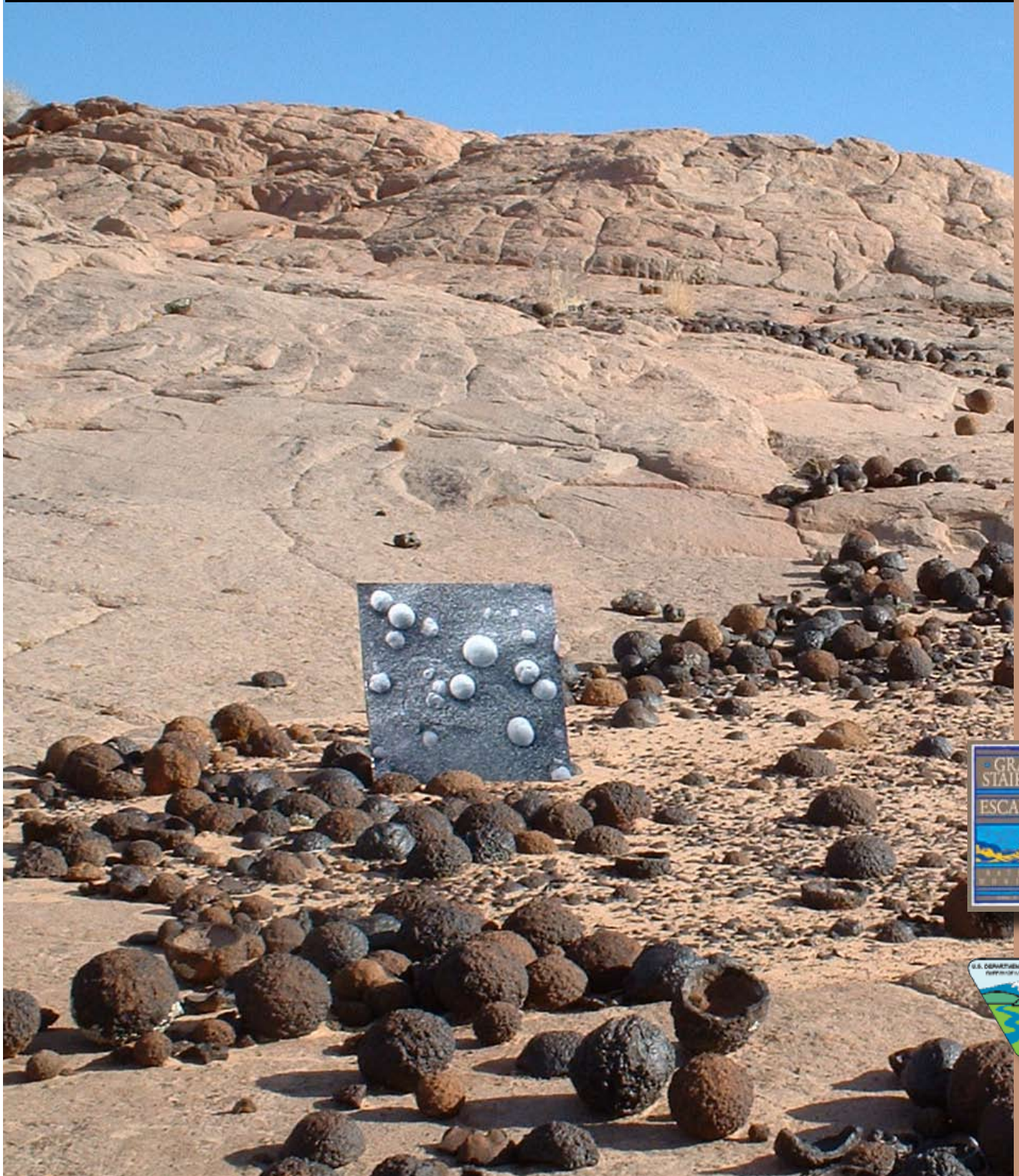


Moqui Marbles on Mars (How Geologic Research from Earth Helped Solve a Mystery on Mars)

Student Questions



Grand Staircase-Escalante National Monument

BLM



Moqui Marbles on Mars (How Geologic Research from Earth Helped Solve a Mystery on Mars)

Question 1

If the Navajo Sandstone had not been “bleached” white, becoming the White Cliffs, they might be called the “Red Cliffs” today. An adjoining rock layer, the Kayenta Formation, forms the red cliffs that are called the Vermilion Cliffs. They too are sandstone, but have *shale* combined with the sand. If you walked along the base of the Vermilion Cliffs, do you think you would find iron concretions? Why or why not?

Question 2

Why is water so important to the search for life on Mars?

Question 3

Why did NASA scientists target the rover to a site on Mars with lots of hematite?

Question 4

What did Steve Squyres mean by his phrase “blueberries in a muffin”? If you need a little help with this, try looking at the following images online:

<http://www.jpl.nasa.gov/missions/mer/images.cfm?id=1057>

<http://www.jpl.nasa.gov/missions/mer/images.cfm?id=743>

<http://www.jpl.nasa.gov/missions/mer/images.cfm?id=647>

Question 5

Compare Utah concretions (Moqui marbles) to Mars concretions (blueberries).

a) How are they alike?

b) How are they different?

Question 6

Iron is not the only atom important in fluid chemistry on Mars. What other important element is represented by the symbol (S)? _____