



Mars Inside and Out!

GEOLOGIC SCENE  
INVESTIGATOR JOURNAL

PART I: SCRATCHING THE SURFACE

Explore! Mars Inside and Out



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Investigator Name

Put the story of Mars' features in order. Start with 1 for the oldest (first) thing that happened, 2 for the next oldest, and then 3, and then 4, and then 5 for the youngest (last) thing that happened. Just like planetary scientists, you might not be able to decide about them all without more information! Discuss the answers with your team.

\_\_\_\_\_ Water flooded across the surface of Mars, carving big channels into the land, and flowing into the lower area to the north.

\_\_\_\_\_ Volcanos on Mars covered some of the craters.

\_\_\_\_\_ Big and small asteroids and comets smashed into Mars, making big and small craters all over its surface!

\_\_\_\_\_ Something happened to cover the craters on the "top half" (north) of Mars. Perhaps an ocean or lots of lava filled it.

\_\_\_\_\_ Asteroids and comets still smash into Mars, but these are smaller and make smaller craters.

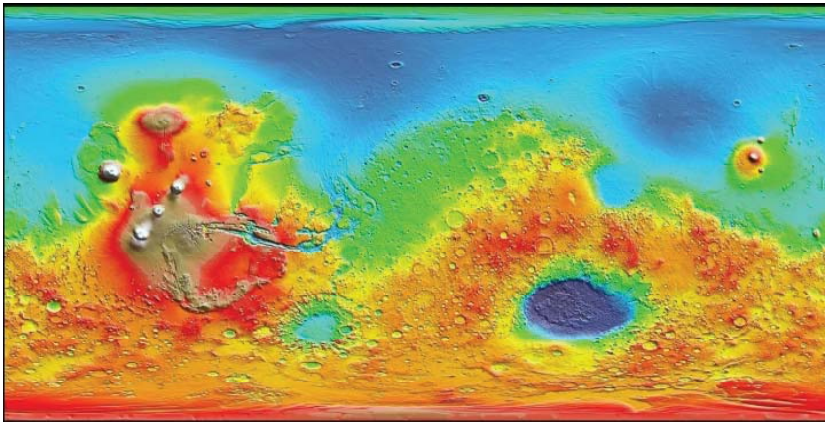
## GSI: MARS – THE FEATURE STORY

What features do you observe on the map of Mars? (circle one)

Volcanos                      Yes   No

Craters                      Yes   No

Channels that may have  
held flowing water              Yes   No



What I know about Mars.



What I want to learn about Mars.

As a Geologic Scene Investigator, your mission is to find clues that will help you solve mysteries on Mars! This investigator journal will help you keep track of the clues that you uncover.

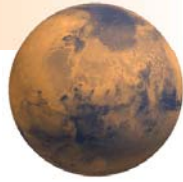
What's happening on Mars right now?

How has Mars changed over time?

How are Mars and Earth similar? Different?

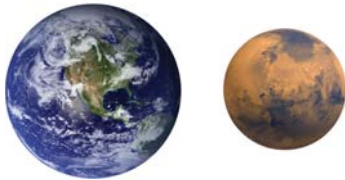
## GSI: MARS – SETTING THE SCENE

Feature 1. Shape (draw it!):



Other things I observed:

Where it occurs (circle the planet):



How I think it forms:

Feature Name:

## GSI: MARS – CRATER CREATIONS

Draw one!

What did your craters look like? What features did they have?

On which planet – or planets – do we see craters?



If a planet has craters, what does this tell you about its history?

## GSI: MARS – VOLCANOS: GO WITH THE FLOW!



On which planet – or planets –  
do we see volcanos?



Are volcanos erupting today on Earth?

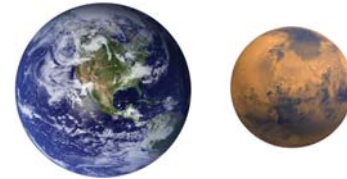
Are they erupting today on Mars?

If a planet has volcanos, what does this tell you about  
its history?

Feature 2. Shape (draw it!):

Other things I observed:

Where it occurs (circle the planet):



How I think it forms:

Feature Name:

Feature 3. – Shape (draw it!):

Other things I observed:

Where it occurs (circle the planet):



How I think it forms:

Feature Name:

## GSI: MARS – CARVING CHANNELS



Draw it! What did the surface of the stream table look like when water was poured onto it?

(Bricks)



(Stream Table)

(Holes)



What are the names of the features you made?

How did they form?

On which planet – or planets – do we see these features?

(circle the planet)



If these features are present on a planet, what does this tell you about its history?