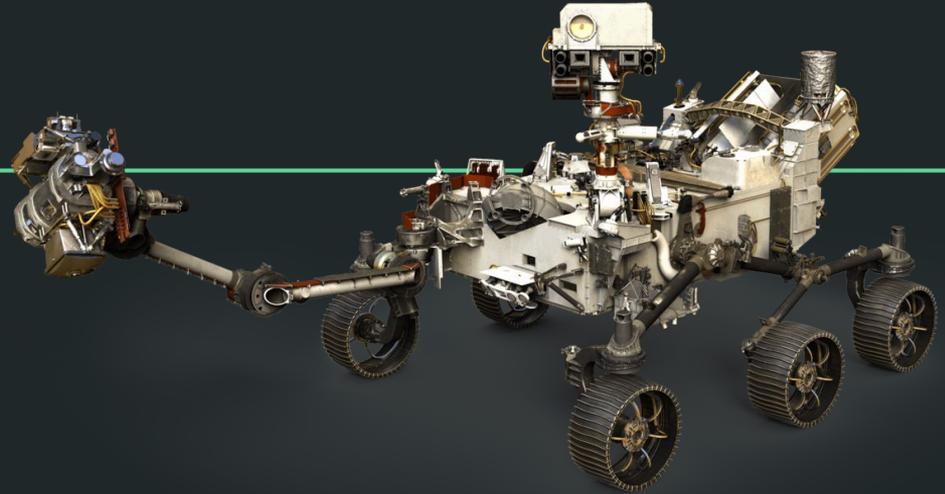


# Perseverance

A Lesson Based on the NASA JPL Classroom Activity:  
Mars Rover Driver Board Game

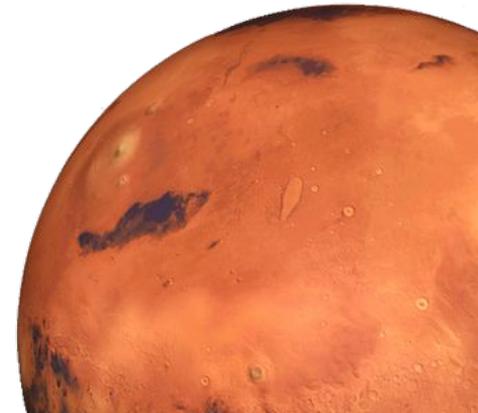


Kimberly Bates, M.Ed.  
Spring 2021



## Lesson Description:

- Engage:** Perseverance landing on Mars!  
What do you know about Mars and the Mars rovers?
- Explore:** NASA Space Place: Mars Rover Game
- Explain:** Debrief - What was easy? What was difficult?
- Elaborate:** Google Mars!
- Evaluate:** Prior knowledge, logical command sequence, and debrief



# Relevance of the NASA Data:

Google

Regions  
Spacecraft  
Stories

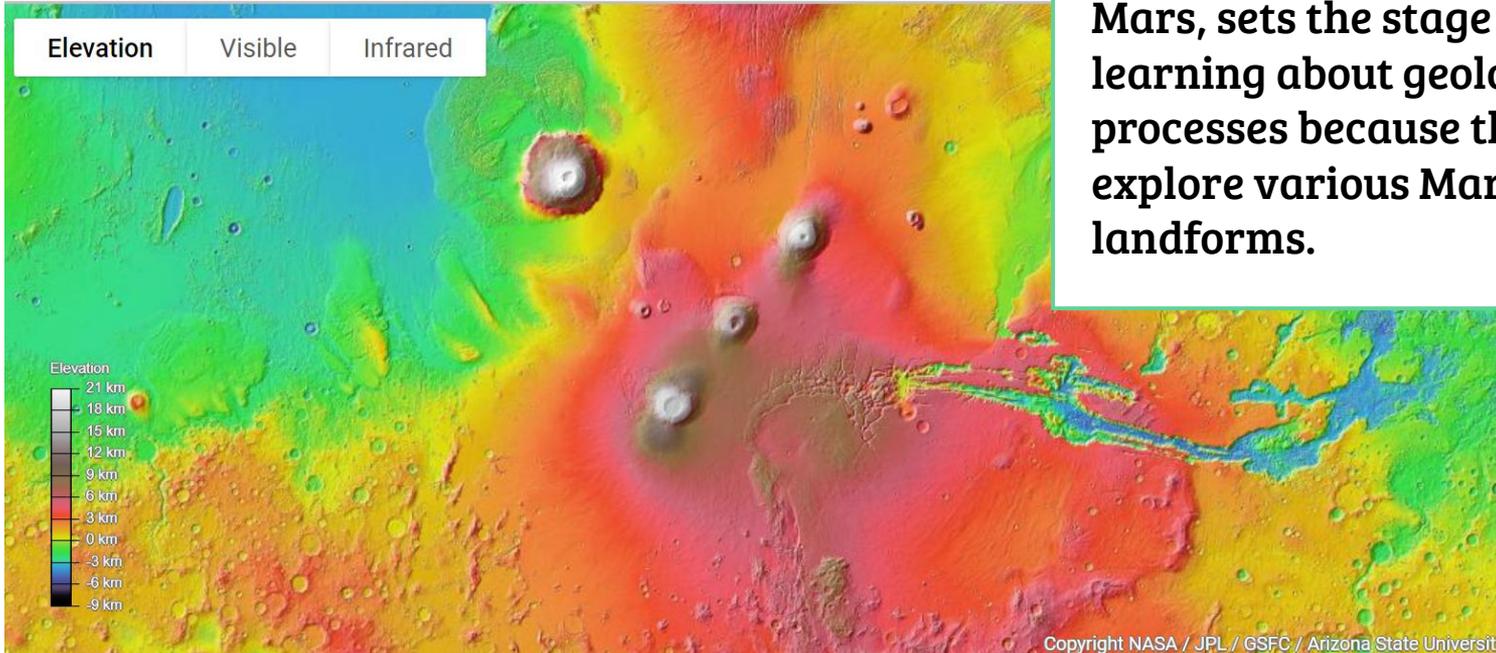
Mountains  
Canyons  
Dunes

Plains  
Ridges  
Craters

Elevation

Visible

Infrared



The authentic NASA data the students view through Google Mars, sets the stage for their learning about geologic processes because they get to explore various Martian landforms.

# Lesson Assessment & Application:

## Strengths:

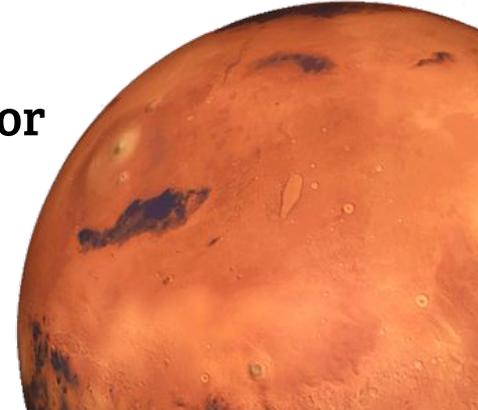
- Follows the 5E Format
- Hands-On/Minds-On
- Debrief questions for metacognition
- Strong anchoring phenomenon

## Weaknesses Addressed:

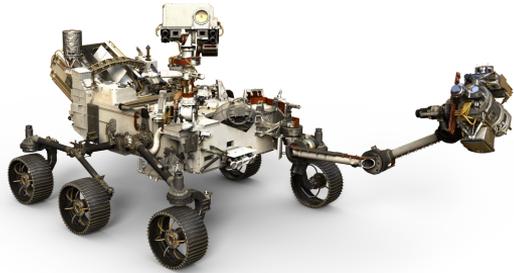
- Updated for Perseverance from Curiosity
- Modified for virtual learning

## Applications:

- Designed for Grades 3-8
- Anchoring phenomenon for geology or space exploration
- Coding activity for technology

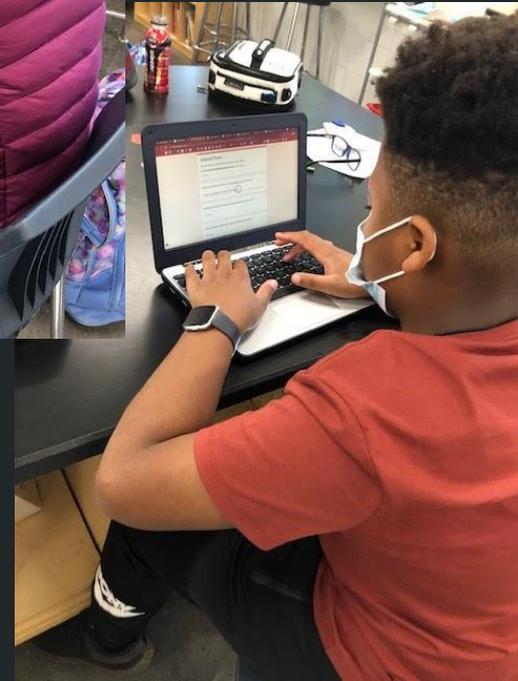


# Student Artifacts:



Student playing  
Mars Rover Game (Top)

Student completing  
the Debrief Form (Bottom)



# Student Artifacts:



What do we know about Mars?

Mars is a rocky inner planet that may have previously had water.

Mars has two moons: Phobos and Deimos

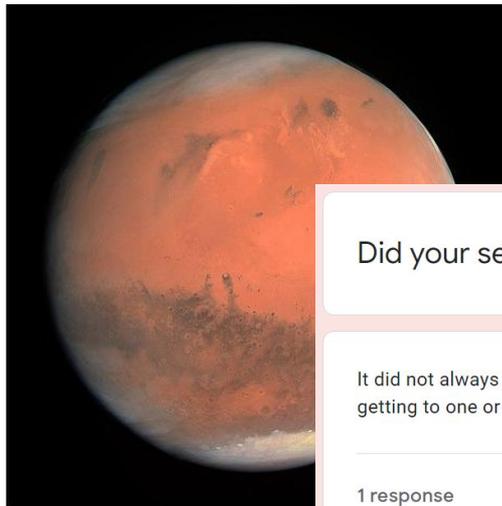
Named after the God of War

It may have once been like Earth

It does have ice

It is tilted like Earth and has seasons

It looks red because it has iron.



Prior Knowledge (Left)

Did your sequence always go as planned? What could affect it?

It did not always go as planned. Rocks in the way was one thing that affected it. Another hard obstacle was getting to one or more rocks in just six moves.

1 response

My sequence did go to plan, but on the real rover, maybe connection could get lost. It could go into a rock or something that could jeopardize the plan.

1 response

Debrief Form (Right)



# Thank You!

Link to NASA JPL Lesson:

<https://www.jpl.nasa.gov/edu/teach/activity/mars-rover-driver-board-game/>

Link to my Lesson Google Slide:

<https://docs.google.com/presentation/d/1vrll5vl4ojLJuc2dD68YuhooloulCK63rKX0DZKtfZ0/edit?usp=sharing>

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