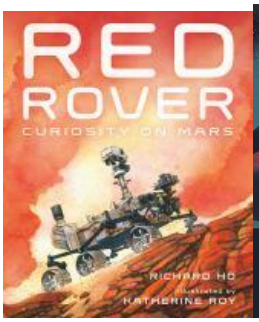
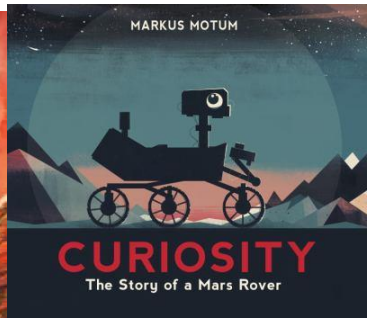
Lesson Starter Title: "Let's Go to Mars!"

Book(s): *Red Rover* by Richard Ho, Illustrated by Katherine Roy and *Curiosity the Story of a Mars Rover* by Markus Motum; plus, these videos: Mars Facts for Kids! (End around 7:45) and How Does NASA's Curiosity Rover Work? and/or this website https://mars.nasa.gov/msl/home/





In a Nutshell:

Mars is one of the four inner planets and has often been compared to Earth for its possibility of once having flowing water. In this lesson, students are learning more about Mars and the rover, *Curiosity,* in order to compare Earth with Mars and learn about the different ways the Rovers help humans understand life. They will read and analyze the results from Curiosity's visit to better understand the purpose of the Rovers. They will also compare/contrast Mars to Earth based on the findings. Students may also extend the lesson to include writing and art.

Do This!

1. Read *Red Rover* with your students, while making sure to pause occasionally and ask questions about what they notice in the pictures and how Mars looks different from Earth.
    a. You may even choose to show the Mars Facts for Kids video afterwards if there's time.
2. Complete the T-chart (next page) as a class comparing Mars to Earth and if time allows and the content is accessible for your students, discuss how Mars and Earth are similar/different to the other inner planets: Mercury and Venus.
    a. This could be a great time to talk about why Rovers haven't been successful in visiting those planets, which is detailed on the NASA website.
3. Do a picture walk of *Curiosity the Story of a Mars Rover* (maybe on a different day if necessary) and pause for questions about the Rover and go over the timeline in the back to discuss how other Rovers have visited Mars *(Perseverance* is up there now!).
    a. Have a short discussion about why Rovers are helpful and ask, "Why do you think it's important for humans to send Rovers to Mars?"
4. If time permits, show the short video, "How does Nasa's..." and allow students to explore the NASA website or if more appropriate, project the site and look at it together as a class. There are TONS of pictures and videos with even an interactive map!
    a. Go over the results summary (next page) and discuss the findings with your students. Here's the link for the page that I condensed https://mars.nasa.gov/msl/mission/science/results/#:~:text=The%20Curiosity%20rover%20found%20that,Sheepbed%22%20mudstone%20in%20Yellowknife%20Bay
    b. Don't forget to go back to the T-chart and add differences you all have learned from the findings!
5. Extension: Have the students choose between the following two activities:

a. Write a thank you letter to Curiosity! Have the students write why they're thankful for everything Curiosity showed them and taught them and have them include an art piece that was inspired by Roy's illustrations.
b. Create their own Rover and name it. Have them pick either Mercury, Venus, or the Moon to send the Rover to and what they think the Rover might find. They can include drawings of the Rover and what its pictures could look like as well as writings of its findings.

Use This—Printable!

T-chart to compare Earth to Mars and Curiosity's Findings (simplified).

T Chart

Graphic Organizer

Organize your information using the headings below.

Topic: Mars and Earth

Similarities	Differences

Curiosity's Findings from Mars

Curiosity Finds Evidence of Persistent Liquid Water in the Past	
A Suitable Home for Life Ancient Mars had the right chemistry to support living microbes and possibly drinkable water once flowed there!	
Ingredients existed for life to get started there at one time	
Radiation Could Pose Health Risks for Humans NASA will use Curiosity's data to design missions to be safe for human explorers.