

A TEACHER'S GUIDE FOR

RED ROVER CURIOSITY ON MARS

FOR USE
WITH COMMON
CORE STATE
STANDARDS

ABOUT THE BOOK

On the vast surface of Mars, a rover named *Curiosity* roams in search of water and signs of life. The planet observes the rover's movements, tracks its progress, and delights in its discoveries. But *Curiosity* is not the first visitor from Earth, and it won't be the last. Mars remembers all the rovers, landers and probes that came before—and wonders who will follow in *Curiosity's* tracks.



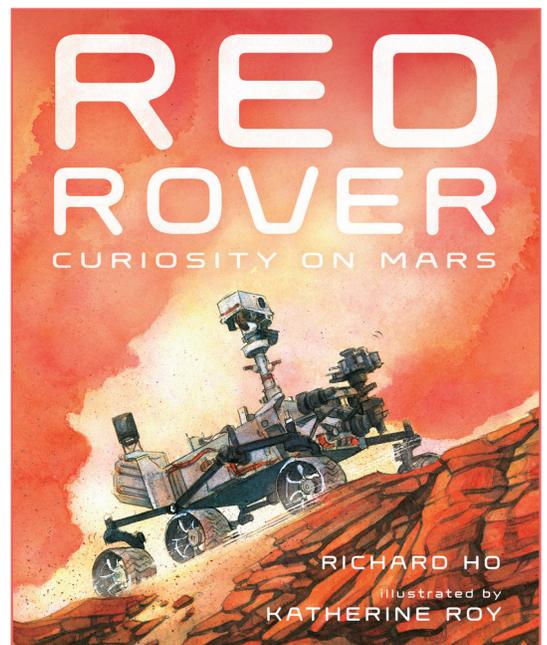
ABOUT THE AUTHOR

RICHARD HO is a former journalist and current editor of an educational website that offers Common Core-aligned animated video content and assessment materials for K through 12 audiences. *Red Rover* is his first book for young readers.



ABOUT THE ILLUSTRATOR

KATHERINE ROY is the award-winning author and illustrator of *Neighborhood Sharks: Hunting with the Great Whites of California's Farallon Islands* and *How to Be an Elephant: Growing Up in the African Wild*. She loves science, history, and big adventures, and is endlessly fascinated by the way things live. A native of the San Francisco Bay Area, she currently lives with her family in Oregon.



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DISCUSSION QUESTIONS

1. Why do scientists want to explore Mars?
2. What makes a rover an ideal tool for exploring another planet?
3. Why is Mars red?
4. Why does *Curiosity* search for water?
5. What makes Mars so challenging to explore?
6. How is *Curiosity* paving the way for humans to explore Mars in the future?

CCSS.ELA-LITERACY.RI.1.1 Ask and answer questions about key details in a text.

CCSS.ELA-LITERACY.RI.1.2 Identify the main topic and retell key details of a text.

CCSS.ELA-LITERACY.RI.1.3 Describe the connection between two individuals, events, ideas, or pieces of information in a text.

CCSS.ELA-LITERACY.RI.1.4 Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.

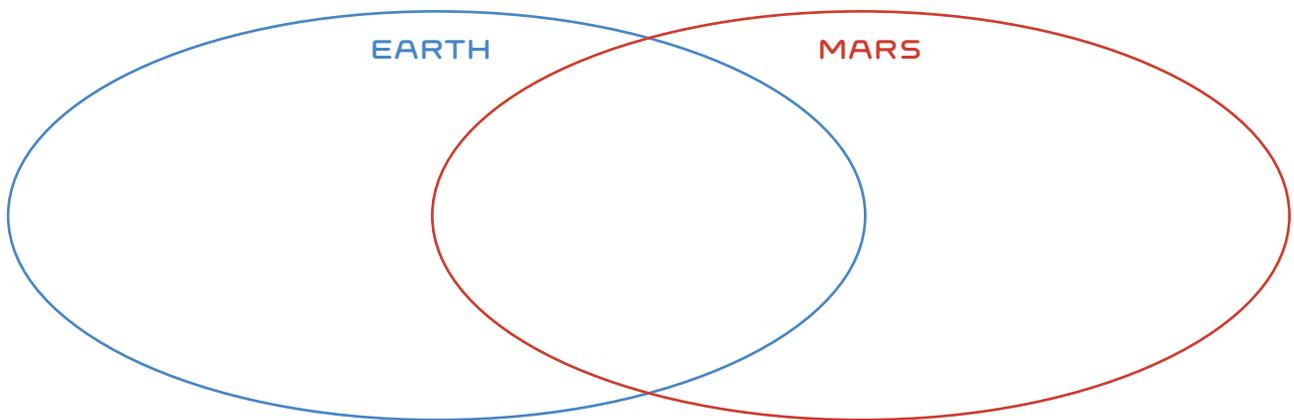
CCSS.ELA-LITERACY.RI.1.6 Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.

CCSS.ELA-LITERACY.RI.1.7 Use the illustrations and details in a text to describe its key ideas.

CCSS.ELA-LITERACY.RI.1.10 With prompting and support, read informational texts appropriately complex for grade 1.

ACTIVITIES

1. *Curiosity* is equipped with many scientific instruments to help it explore. Describe each instrument's purpose. Then think of a common tool or device used on Earth that has a similar function.
 - CHIMRA
 - Hazcam
 - Navcam
 - SAM
 - DRT
 - Mastcam
 - REMS
 - UHF antenna
2. Every Mars rover is specially designed to navigate the harsh Martian landscape. Imagine you're in charge of testing a rover on Earth. What locations would you visit to simulate the conditions on Mars?
3. Earth and Mars are planetary neighbors with much in common—and much that sets them apart. Fill in the Venn diagram with facts about both planets.



4. Research one of *Curiosity*'s friends. Then rewrite the first eight pages of the book—with the friend as the star instead of *Curiosity*.
5. Research the Mars 2020 rover. How will it compare to *Curiosity*? What improvements will it include, and how will its mission differ?

