

Mars Rover Reaches 5,000 Days on the Red Planet

NASA's Curiosity rover is still climbing, testing wind-shaped sand after 5,000 Martian days.



A Mars rover studies a narrow sand ripple on a rocky red slope.

NASA's Curiosity **rover** has now worked on Mars for 5,000 Martian days, according to NASA's Curiosity rover blog. A Martian day is called a sol. It lasts 24.6 hours, a little longer than a day on Earth. That means Curiosity has been exploring for more than 5,137 Earth days.

Curiosity is a rover, which is a robot car built for science. It rolls slowly over rocks and sand. It takes pictures and uses tools to study what the ground is made of. No astronaut is driving it from the seat. Engineers on Earth send plans, and the rover follows them on Mars.

This milestone matters because Mars is far away and rough on machines. Dust, rocks, slopes, and time can wear parts down. Curiosity has kept going long enough to climb more than 1 kilometer above its landing place. That is about 0.62 miles. For a robot on another planet, that is a mountain-sized achievement.

Right now, Curiosity is studying a long, narrow sand **ripple** named Chokolatal. A ripple is a small ridge made when wind pushes **grains** of sand. Scientists want to know if Chokolatal is a kind of feature called a transverse aeolian ridge. That means a wind-made ridge that lies across the usual wind direction.

If you could stand near Curiosity, you would see a quiet, rocky place. There would be pale **bedrock** nearby and darker coatings on some rocks. Ahead would be the ripple, like a low stripe of sand. The rover would not rush. It would stop, look, test, and wait for new directions.

The team even drove one wheel into Chokolatal and backed up. That made a small **trench**, or cut, in the ripple. Then Curiosity could study the inside, not just the **surface**. Its cameras looked for **layers**. Its instruments checked grain sizes and the chemistry of the sand and rock.

These details help scientists read Mars like a very old book. Wind can move grains, build ridges, and leave patterns behind. By studying one ripple closely, scientists learn how the Martian surface changes. They also learn how today's Mars compares with places Curiosity visited lower on Mount Sharp.

Curiosity's 5,000 sols are not just a birthday. They show what careful planning can do. A robot the size of a small car is still asking new questions, one slow drive at a time.

Written from reporting by NASA.

THINK IT THROUGH

1. Should a rover spend extra time studying one small place, or keep driving to see more places? Defend your choice.

A strong answer: A strong answer weighs deep evidence from one spot against the chance to compare many different spots.

2. What makes Curiosity's work similar to a classroom science project, and what makes it very different?

A strong answer: A strong answer connects planning, tools, teamwork, and observation while noticing distance, delay, and risk.

3. What information would help scientists decide whether Chocotal is still being changed by wind?

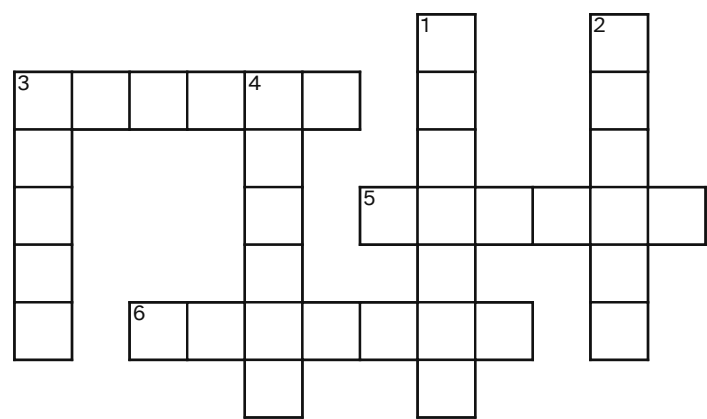
A strong answer: A strong answer suggests evidence such as repeated pictures, wind clues, changed grains, or changes in the trench.

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P H E V S L R D A E
T E I B U O E P E R
P S P R R I P P L E
C R K L F G N H T O
V R T L A Y E R S H
M O S R C O F R N E
O V P B E D R O C K
C E C T V N D R F C
G R A I N S C E S F
D T O U O E O H O R

BEDROCK GRAINS LAYERS RIPPLE ROVER SURFACE
TRENCH

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ACROSS

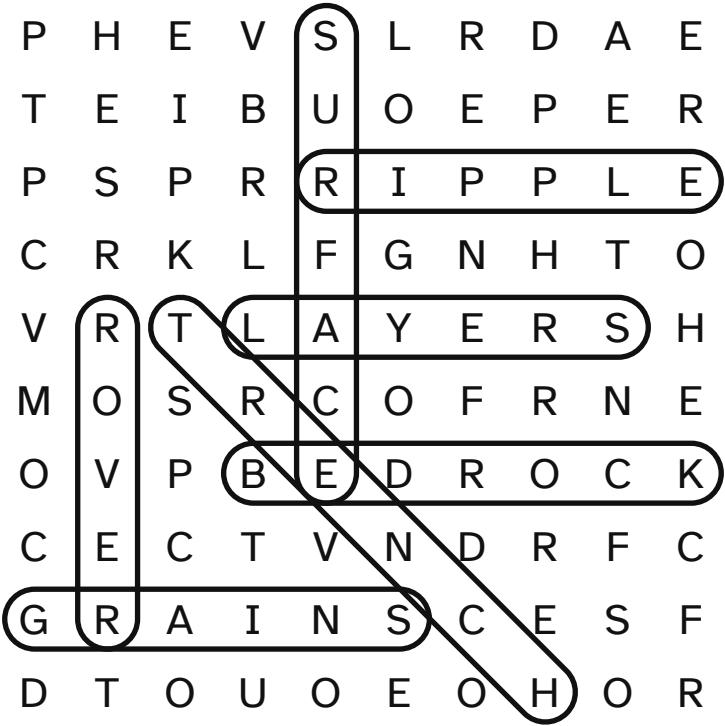
- 3 Small sandy ridge shaped by wind
- 5 Tiny pieces of sand or rock
- 6 Top outside part of ground or stone

DOWN

- 1 Solid stone below soil, dust, or sand
- 2 Narrow ground cut that shows what lies underneath
- 3 Wheeled explorer sent to another world
- 4 Stacked sheets that can show changes over time

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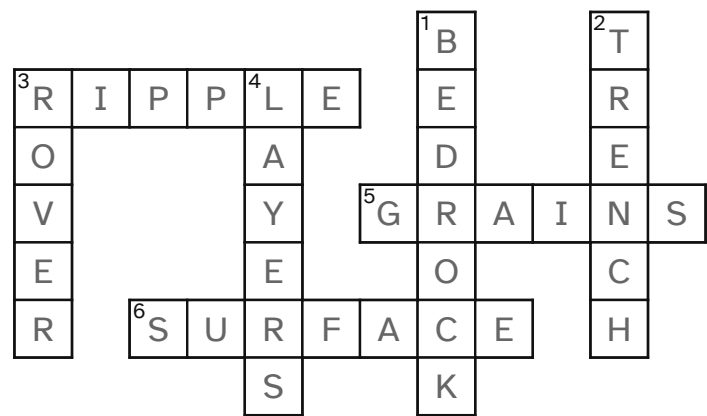
— answer key



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Where this came from

This article was written for 3andB from the reporting below. It is not a reprint — the wording is ours and the facts are theirs.

NASA

“Curiosity Blog, Sols 4995-5001: 5,000 (Martian) Days on Mars”

Published Wednesday, September 9, 2026

Read by us on Wednesday, September 9, 2026

<https://science.nasa.gov/blog/curiosity-blog-sols-4995-5001-5000-martian-days-on-mars/>

WHAT IS IN THIS PACKET

The article with a note on each question, a word search, a crossword, and the answer key to both.

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