**Teacher Resources**

Compare and contrast Earth and Mars

What is the same about our planet and the Red Planet?

* Turn & talk, type on Padlet, or record a Flipgrid to answer the question

[What is different about our planet and the Red Planet?](https://mars.nasa.gov/allaboutmars/facts/#infographic)

* Turn & talk, type on Padlet, or record a Flipgrid to answer the question.

Why do we use rovers? [Labeled image](https://mars.nasa.gov/mer/mission/images/rover1_detail_500.jpg)

-Project or print out images for students to explore

**How do you get to Mars?** [Mars in a Minute video](https://www.jpl.nasa.gov/edu/learn/video/mars-in-a-minute-how-do-you-get-to-mars/)

How do you land on Mars? [Mars in a Minute video](https://www.jpl.nasa.gov/edu/learn/video/mars-in-a-minute-how-do-you-land-on-mars/)

How hard is it to land Curiosity on Mars? [Mars in a Minute video](https://www.jpl.nasa.gov/edu/learn/video/mars-in-a-minute-how-hard-is-it-to-land-curiosity-on-mars/)

How was the landing? [Curiosity’s Seven Minutes of Terror](http://www.smithsonianmag.com/videos/category/science/curiositys-seven-minutes-of-terror/)

How do rovers drive on Mars? [Mars in a Minute video](https://www.jpl.nasa.gov/edu/learn/video/mars-in-a-minute-how-do-rovers-drive-on-mars/)

**Mars Rover Races Student Data Log**

**Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **HR:** \_\_\_\_\_\_\_\_ **Date:**\_\_\_\_\_\_\_

**Why do we use rovers?**

Write or draw a feature that would help a rover drive on Mars.



**How do we get to Mars?**

Describe one challenge/difficulty: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How do we land on Mars?**

Circle the option you would choose:

 Airbags Retrorockets & landing legs Jetpack & cables

Explain why you chose this: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How hard is to land Curiosity on Mars?**

What do you think is the MOST important thing Curiosity had to do correctly to land safely? Why? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How was the landing?**

Is *Seven Minutes of Terror* a good title for this event? Why or why not? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How do rovers drive on Mars?**

Fill in at least 1 pro (benefit) and 1 con (difficulty) with each type of driving method.

|  |  |  |
| --- | --- | --- |
|  | Step-by-step commands | Autopilot |
| Pros |  |  |
| Cons |  |  |

As a rover, what are some things you need to beware of?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**What is like to be a rover?**

My rover role: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

My role was challenging because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

On a scale of 1 -10, our rover team was a \_\_\_\_\_\_\_ because

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Our rover (circle one) WOULD / WOULD NOT be successful on Mars.

To improve, our rover team needs to work on:

Communication distance measurements confidence in teammates

Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_