

# Mars Rescue Mission

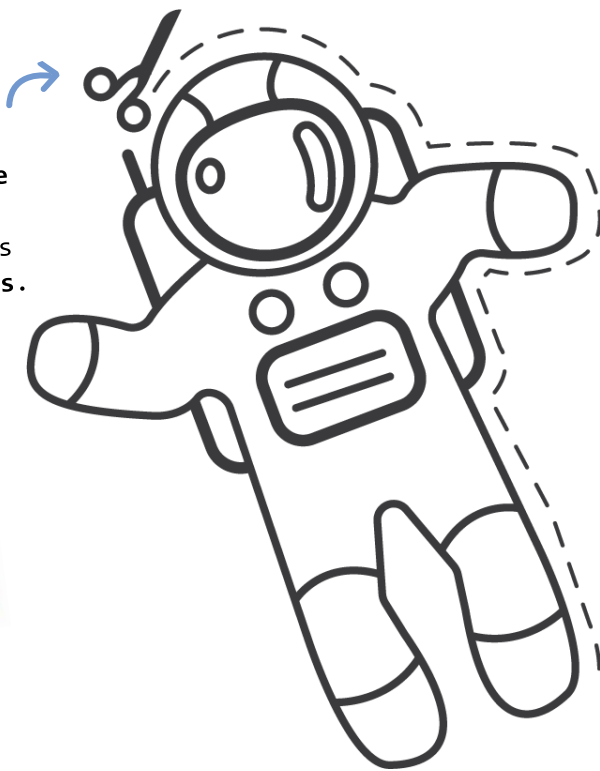
## Mission Brief

The first humans on Mars will travel over 9 months to reach the red planet. That's just the easy part.

## Landing Notes

Your racer (and its cargo) must land safely and accurately on the target in seven minutes or less.

Cut me out, and tape to popsicle sticks, pencils or other objects to add more mass.



For a more in-depth Mars Rescue Mission, download the free, immersive powerpoint

Presentations at [teachergeek.com/Learn](http://teachergeek.com/Learn)

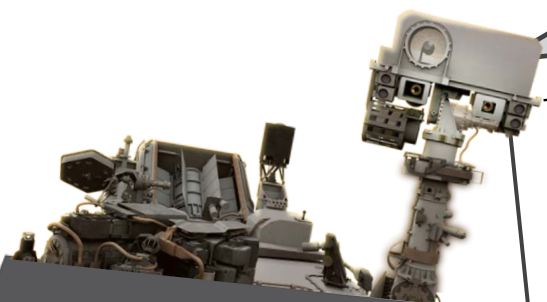
Uses an aeroshell & parachute to safely land.



Use rubber ducks, the astronaut template below or other materials to represent human cargo.

## A time limit raises the landing stakes.

The Mars Curiosity Rover had only 7 minutes to reach the planet's surface from when it entered the atmosphere. NASA engineers had to execute each step perfectly or lose the rover. How accurate can you be in seven minutes?



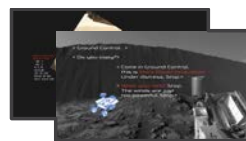
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Escape the incoming Martian **Dust Storm** and return to base safely in one piece.

## Outrace Storms?

Dust storms are no joke - damage to your rover could lose years of research. Escape as fast as you can.



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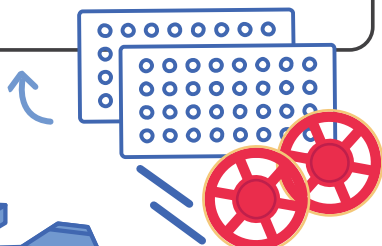
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The **climate** on Mars is unpredictable - ice clouds and dust storms can put your Mars Rover in **danger**.



The **fastest Mars Racer** escapes the storm intact.

The rest of the racers must **lose one component** as damage from dust. Then, race again!



**Need wind?**

Use a fan to create a gusty storm for your racers.



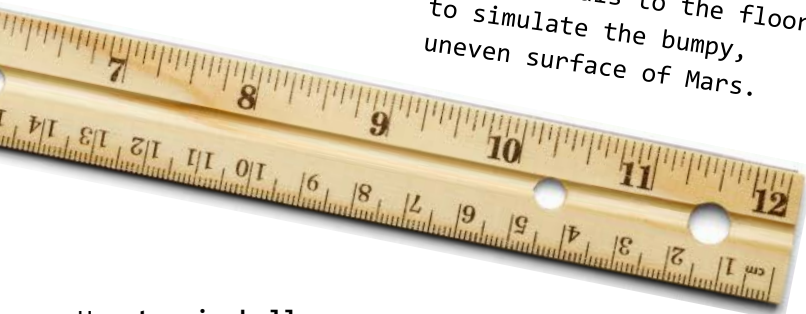
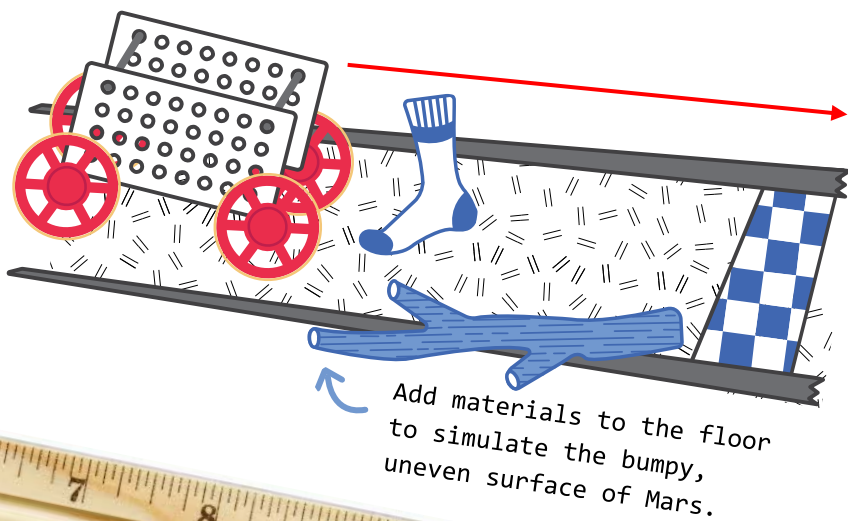
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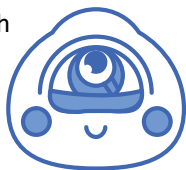
Redesign your Mars Rover to travel as far as possible across the Zunil Crater.

## Cross the Crater

Bumpy, uneven basalt (rock) covers the 10 km (6.5 mile) surface of the Zunil Crater. How will you plan for this friction (traction)?

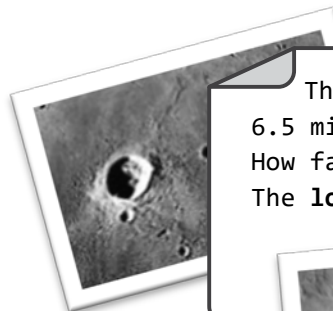


Use tennis balls or another object with mass to represent alien specimens. Decorate and name your new species!

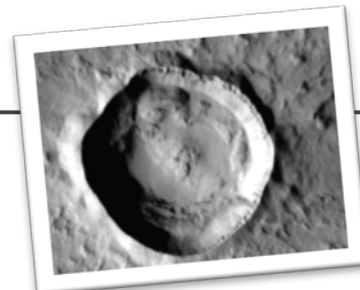


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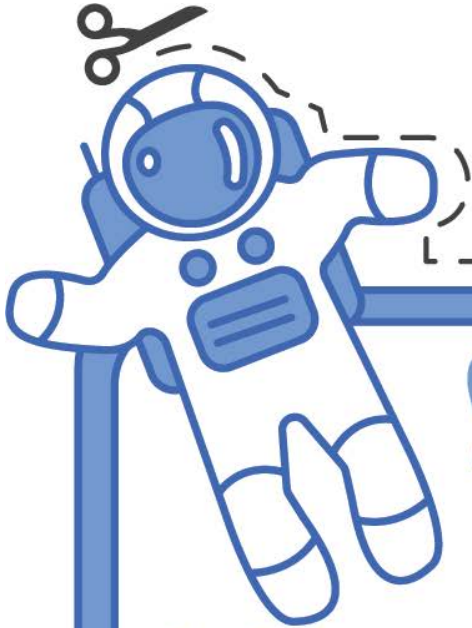
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The Zunil Crater is 6.5 miles (10 km) wide. How far can your racer go? The longer, the better.







## Mars Rescue Mission Certificate of Completion

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for the succesful and creative  
completion of the TeacherGeek  
Mars' Engineering Challenges



Receive this award after successfully finishing  
all three **Mars Rescue Missions** – congratulations!  
You are now a true Mars Engineer Emeritus.