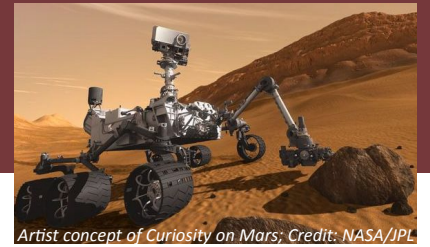


# SciNews



Artist concept of Curiosity on Mars; Credit: NASA/JPL

**Event:** Mars Science Laboratory Rover Curiosity Launches

## Important Dates:

+ November 26th 2011: NASA's Curiosity Rover launched to Mars  
+ August 2012: Curiosity lands on Mars and begins exploring

SciNews is now on Facebook!  
Project website: <http://sese.asu.edu/teacher-resources>

## Event Description

With the success of the Mars Exploration Rovers Spirit and Opportunity, NASA launched the Mars Science Laboratory (MSL) Rover named Curiosity just after Thanksgiving. The goal of this mission is to determine the planet's "habitability", meaning it will assess whether Mars ever was, or is still today, an environment able to support microbial life (from NASA). Curiosity is about the size of a Mini Cooper car, and to complete its science mission it is equipped with 11 instruments, including a radioisotope power system. Although scientists decided to land Curiosity at Gale Crater, near the boundary between the Martian southern highlands and northern lowlands, the three other finalist sites (Holden, Eberswalde, and Mawrth) all provided compelling opportunities to address the main science goal of studying habitability. Where would you have sent Curiosity?

## Lesson Description

*In this lesson students collect info on the final four landing sites by watching a video & viewing them in Google Mars. Following a class debate, students vote which site to send the Curiosity Rover.*

As an introduction, discuss the recent launch of the Mars rover Curiosity. You might watch the launch or other videos provided on the SciNews website. (1) Watch the **NASA video on Curiosity Landing Sites** & ask students to take notes on the sites using the (2) **Student Landing Site Selection Form**. (3) Double click on the **Curiosity Landing Site Google Mars.kmz** - it will prompt you to switch to Google Mars; open the folder & double click on each landing site to fly to them. (4) Students should add to their notes as you visit each site and linked websites. (5) Discuss each site in groups/class, then as the class vote which landing site you would want to send Curiosity to. (6) Watch the **NASA Gale Crater Video**. Does your class agree or disagree with the site selected by the scientists? Remember, not all scientists agreed with Gale Crater!

**Alternative:** Divide class into 4 groups, having each group research a site & advocate why theirs is the best based on the information they collected via a slide show/presentation using a wipe off board.

**Lesson Materials** - download from the SciNews website:

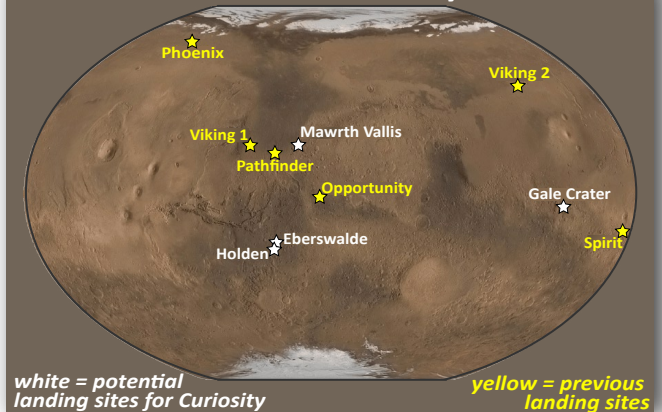
- (1) **NASA Video on Curiosity Landing Sites:** Describes each of the four potential landing sites and their geology.
- (2) **Student Landing Site Selection Form (.pdf):** Students take notes and write their argument on which landing site is the best.
- (3) **Curiosity Landing Site Google Earth (Mars) .kmz file:** Location of each potential landing site (Google Mars), including photos, maps, and links to additional information on the site.
- (6) **NASA Gale Crater Video:** Describes Gale Crater, the NASA selected Landing site for Curiosity.

### Targeted Arizona State Standards (6<sup>th</sup> - 8<sup>th</sup> grade)

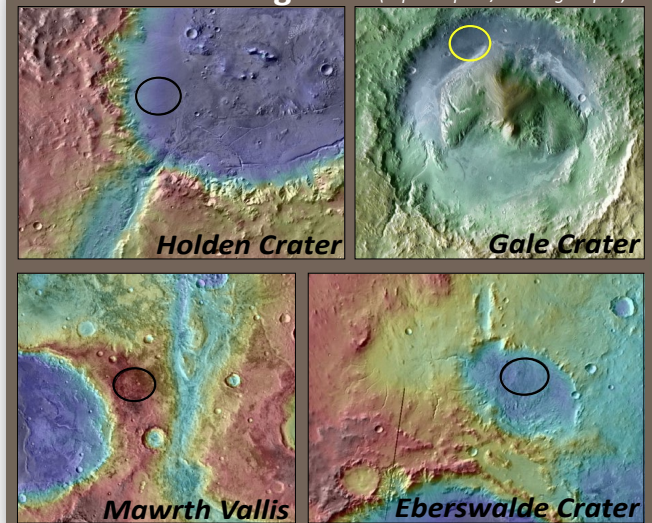
(grade 7) Strand 1, Concept 3: Analysis and Conclusions - (PO5) Formulate a conclusion based on data analysis.

(grade 7) Strand 3, Concept 2: Nature of Scientific Knowledge - (PO3) Apply scientific processes to other problem solving or decision making situations.

## Where Should Curiosity Land?



## Potential Landing Sites (topo maps w/ landing ellipse)



**Informational Websites:** (links provided on the SciNews website)

- + NASA/JPL Mars Science Laboratory Website
- + Educator Background Materials - MSL fact sheet and mission overview

**Alternative Lesson Plan:** (link provided on the SciNews website)

- + Mars For Educators: NASA site that contains great lesson ideas and materials for all levels



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Funded by ASU/NASA Space Grant  
(<http://nasa.asu.edu/>)

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