

Lesson 1: Welcome to Earth and Mars

Summary

This introduction will expose students to Mars imaging software platforms so that students may become familiar with their navigation and imagery products.

Learning Goals

Students will be able to:

- Navigate and use both Google Mars and JMARS.
- Become familiar with imagery collections available (e.g., HiRISE, CRISM, THEMIS) via the above software programs.

Context for Use

This learning module is meant for adaptation in an introductory earth science course and/or planetary science course. The *In-Class Activities* can be easily adapted for homework when desired.

Description and Teaching Materials

In-Class Activity

In-Class Activity 1: Mars Analogs

Homework/Lab

Homework 1: Google Mars

Homework 2: Exploring Gale Crater

Homework 3: JMARS- Mawrth Vallis
“Potential landing site”

Homework 4: Meet the Scientist-
Who studies Mars?

Homework 5: Having fun with Mars
programs

Assessment

- Methods of assessment are within each individual *In-Class Activity* and *Homework*.

Teaching Notes and Tips

1. Before assigning Homework 1 or 2 spend some time exploring both Google Mars and JMARS with the students for a “first pass” exposure.

Mars for Earthlings

References and Resources

1. Image File: [Welcome to Earth and Mars](#)
2. JMARS Website: <http://jmars.asu.edu/>
3. Google Earth Free download: <http://www.google.com/earth/index.html>



Mars for Earthlings

Homework 5

Intro to Mars_MFE

Having fun with Mars programs

1. Directions: Navigate to NASA’s Eyes on the Solar System <http://eyes.nasa.gov/>

Explore Mars, and click on the Spacecraft icon.

Name the 3 types/categories of Mars Missions and cite the newest (most recent/current) example of each:

Mars Mission TYPE	Newest Example
a. _____:	_____
b. _____:	_____
c. _____:	_____

Click on the Landing Sites icon (top bar on right). Which landing site was closest to the N Pole of Mars? _____

Explore several other planets. Which of the other Non-Mars planets did the students find most interesting? _____

Explain why, what was interesting to the students?:

Note: The students can look at the planet in all kinds or orientations.

2. Directions: Navigate to NASA Spacecraft 3D (may work best on mobile, available in app store free download). The students may want to use the Augmented Reality target.

Take a picture of you and the Curiosity rover and email to you

