

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.

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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>



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Homework 4

Intro to Mars_MFE

Meet the Scientist-Who studies Mars?

Directions: Navigate to <http://serc.carleton.edu/marsforearthlings/index.html> and click on "Meet the Scientist". Answer the following questions:

Watch all the short clips (only 2 mins. each or less) and answer the following questions.

1. How is this group of profiled scientists DIVERSE?
2. Who are the scientists that study Mars? *Choose 5 scientists to profile.*
List the scientists' last name and the institution each scientist is associated with. Describe the goals of their research.

	Name	Institution	Research
a.			
b.			
c.			
d.			
e.			

3. What is interesting and relevant? Have students choose two of their favorite scientists from *Meet the Scientists*.

- What is the most interesting fact (or rumor) they can find when they Google their name?

	Name	Fact
a.		
b.		

- In their opinion, is their research relevant (use a scale from 1-10 with 10 being extremely relevant)? Have them give a brief statement to justify their answer.

	Name	Relevance
a.		
b.		

- Can their research be helpful in other fields? If so give example(s).



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Name

Helpful

a.

b.

- If students were an investor/ philanthropist/ government official would they fund the scientist's research? What would they change or applaud in their research?

Name

Fact

a.

b.

