MARS IMAGE ANALYSIS ACTIVITY (Cont'd) AND QUESTION MARS ACTIVITY

Minimum materials required:

- 1 Internet-connected computer per team
    - *Mars Image Analysis Activity* materials: 1 set per team of students
    - One THEMIS visible image
    - The accompanying context image
    - An 11" X 17" MOLA elevation map of Mars
    - Erasable markers
    - Ruler
    - Calculator
- *Feature Identification Charts*: 1 per student (students should already have this handout)
- *Mars Image Analysis Student Worksheets*: 1 per team of students (students should already have this handout if you are choosing to use this)
- *Question Mars Student Guide*: 1 per student (students should already have this handout)

Mars Image Analysis Activity

Begin this meeting by providing the first ~25 minutes for students to continue with the *Mars Image Analysis* activity. Have students continue making observations of images and logging those observations on the *Mars Image Analysis Student Worksheets*.

Bring the activity to a close by reiterating two important points:

- It is important to look at the surrounding area (the context) of where an image was taken in order to better understand what geologic features may be in an image;
- Their research project will need to focus on specific geologic features associated with a general topic.

Question Mars Activity

You will find the Question Mars Teacher Guide, Student Guide, and Feature Identification Charts (these are the same ID Charts that were used with the Mars Image Analysis activity) that go along with this activity at the following links:

It is important for students to know that starting with general questions is good, but that those general questions need to be focused on something very specific (like the geologic features related to general topics they were looking at with the *Mars Image Analysis* activity). The goal of this activity is to help them focus their questions.

The other set of bulleted information focuses on the THEMIS instrument. The information is as follows:

THEMIS (pictured on the left) is a two-in-one camera system:

- Visible Imaging System:
- Shows the morphology or shape of the surface
- Infrared Imaging System:
- Can tell us the temperature of the surface (daytime and nighttime)
- Provides information about what materials on the surface are made of
- Daytime infrared images also show the morphology or shape of the surface in much the same way visible images do.

Students should realize that the camera can take both visible and infrared images. Students should focus ONLY on the morphology (specific geologic features or landforms) seen with either of those data sets of images.

Once students reach a decision on what topic the team will focus on, have each student spend approximately five minutes individually brainstorming questions they may have about the chosen topic. Some students may not finish creating five complete questions within the time frame provided. They should write down as many complete questions that come to mind in the five minutes provided.