

Terrestrial Terrain

Lesson Title: GeoHunter

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Use the resources on the Terrestrial Terrain student E-Sheet to help you answer the questions on this student sheet.

Terrestrial Terrain E-Sheet

<http://sciencenetlinks.com/Esheet.php?DocID=232>

Terrestrial Planets

What are some geological structures or formations found on the terrestrial planets Mercury, Venus, Earth, and Mars?

What kind of information can evidence of craters on the surface of a planet or moon help scientists figure out?

What are some geological formations on Earth? Do you think that our understanding of these features could be applied to other planets?

When scientists get pictures and data back from Venus, Mars, and Mercury, do you think that they will all come up with the same “explanation,” or hypothesis, for the planet’s geological history?

Explore Mercury’s Geology

What do you notice about the distribution of the craters, scarps, and volcanoes in the images? Is there any kind of pattern? If so, what is it?

Can you form a hypothesis about the distribution of these features on the planet? What would it be?

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Are these images of Mercury how you expected the planet to look?

Do these images look like the images of any other planets, moons, meteors, etc. in the solar system?

Why do you think Mercury appears to have so many craters, volcanoes, and scarps?

GeoHunter

What types of geological formations did you collect pictures of?

What can these geological formations tell you and scientists about Mercury?

Is the process of analyzing the data something that happens right away when information is sent back from MESSENGER?

Do you think that all geologists who look at this data will come up with the same explanations for why Mercury has these surface features?

Do you think this new information from MESSENGER will lead to new hypotheses about the planet's geological history? If so, why?