Volcanoes on Mars
The Fires of Ares
Objectives

By the end of this lesson, you will be able to:

• Understand how volcanoes form
• Explain what convection is and why we would find it inside a volcano
• Determine the habitability of volcanoes on both Earth and Mars
Types of Volcano

Composite Volcano

Cinder Cone Volcano

Shield Volcano
Olympus Mons: Shield Volcano

Image credit: NASA
How do Shield Volcanoes Form?

Click button below to link to video:
Iceland Field Sites

• Can be used as analogues to volcanic areas of Mars, such as Olympus Mons.
Convection
How does convection work?

Click button below to link to video:
Life on Mars? Do you think any kind of life could survive inside volcanoes?

Remember that:

• Volcanoes spew out hot, acidic lava!
• The inside of a volcano is under a lot of pressure!
WHAT ABOUT MICRO-ORGANISMS?

The Extremophiles!
Recap

Now we can...

1. Understand the type of volcanoes found on Mars and how they formed.
2. Explain what convection is and why it occurs in a volcano.
3. Determine the habitability of volcanoes (on Earth and Mars!).