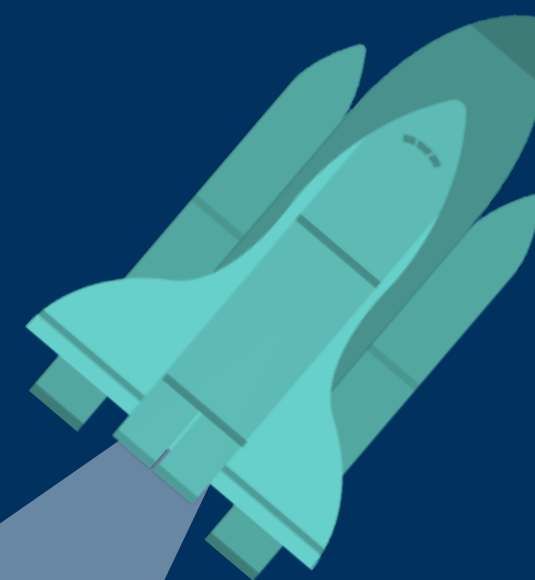




# Volcanoes on Mars

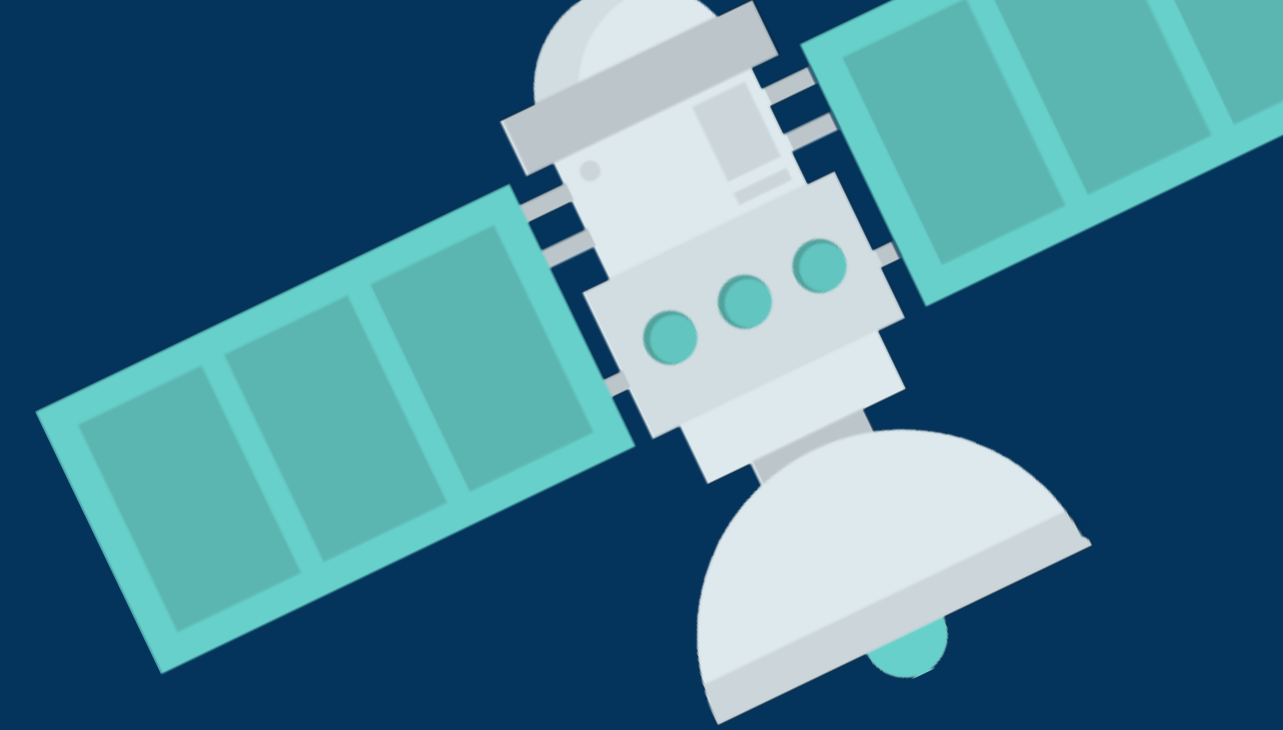
## The Fires of Ares



# Objectives

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

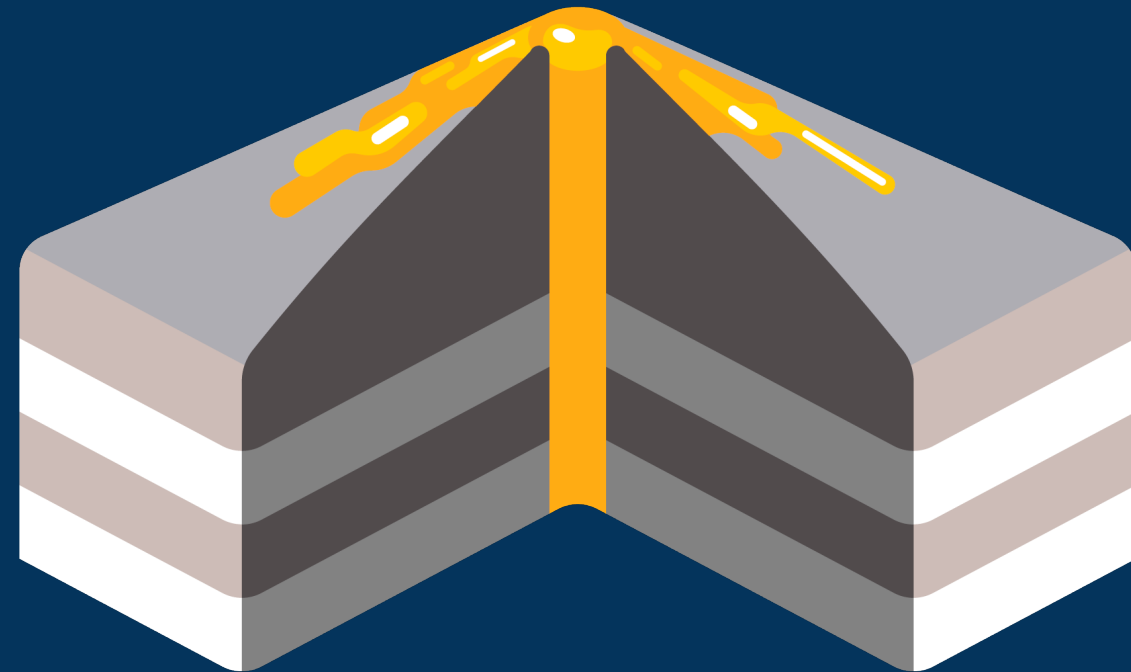
- Understand how volcanoes form
- Explain what convection is and why we would find it inside a volcano
- Determine the habitability of volcanoes on both Earth and Mars



# Types of Volcano



Composite Volcano



Cinder Cone Volcano



Shield Volcano

# Olympus Mons: Shield Volcano

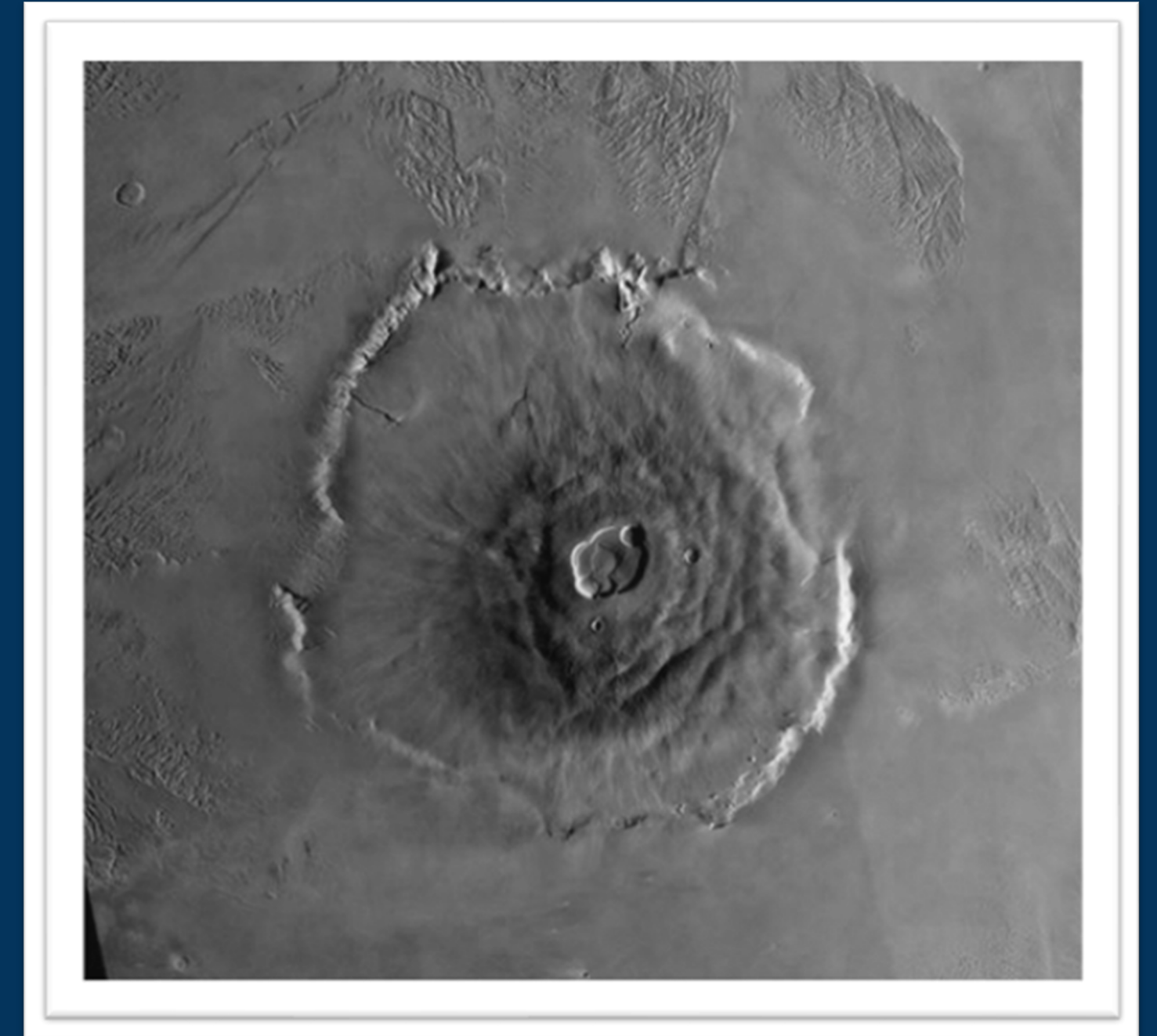
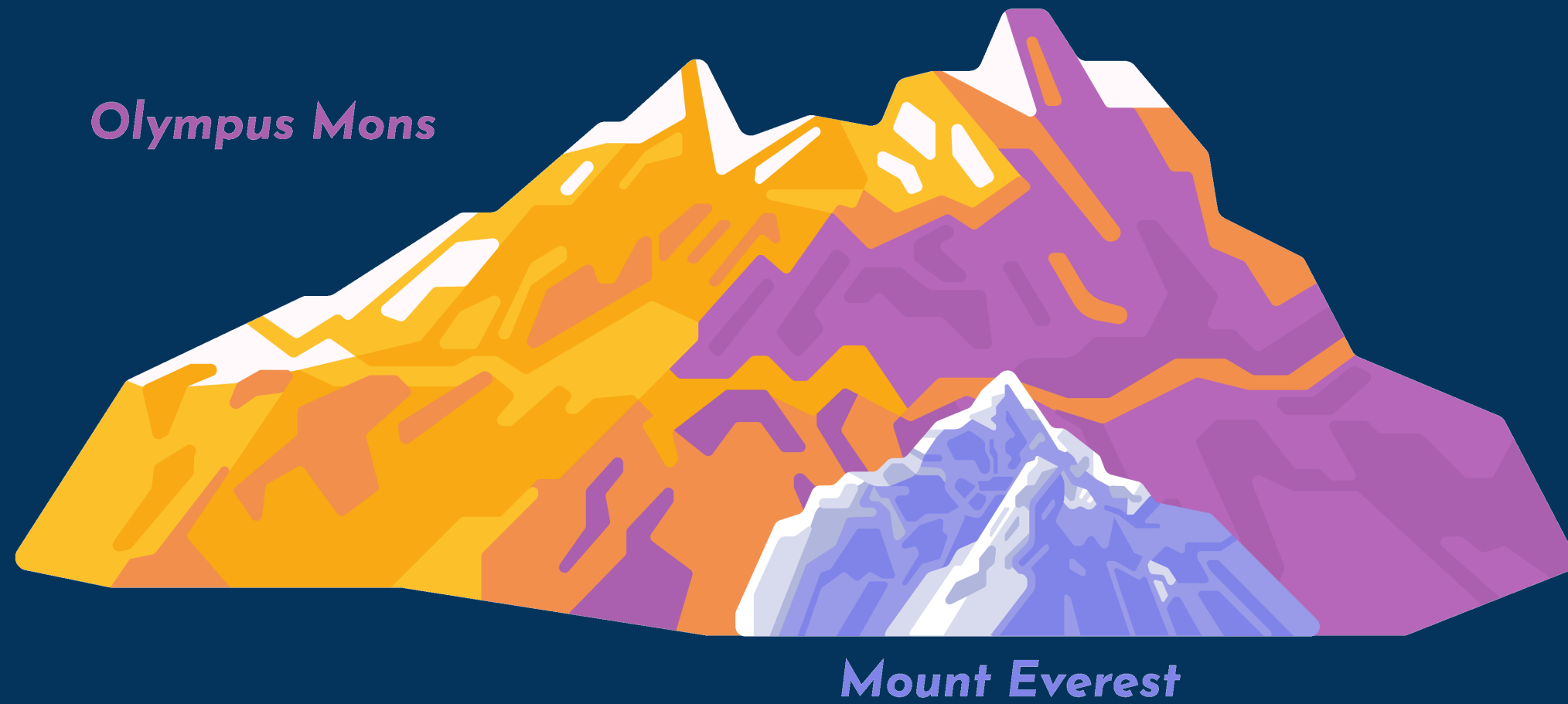


Image credit: NASA

# How do Shield Volcanoes Form?

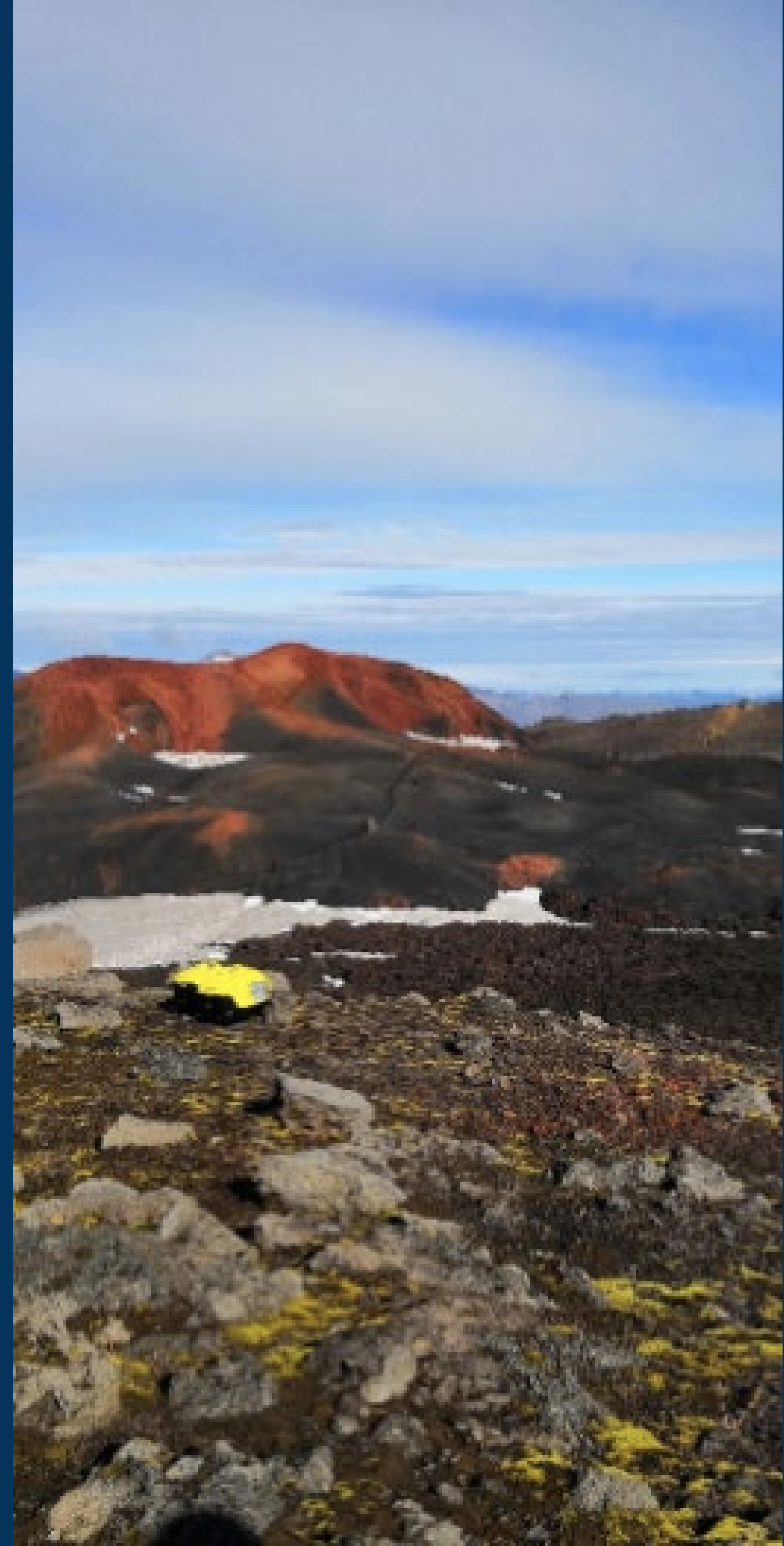
Click button below to link to video:





# 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:

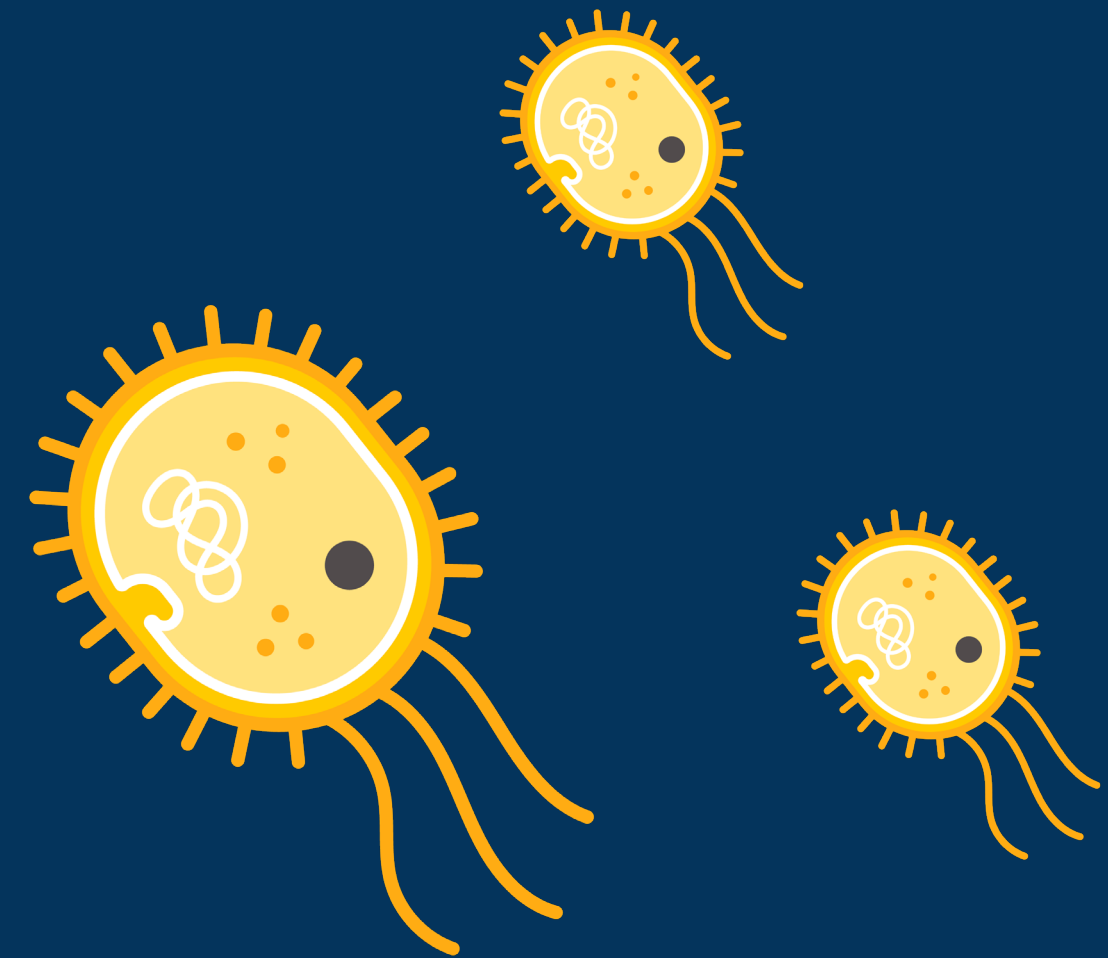




# Life on Mars? Do you think any kind of life could survive inside volcanoes?

## Remember that:

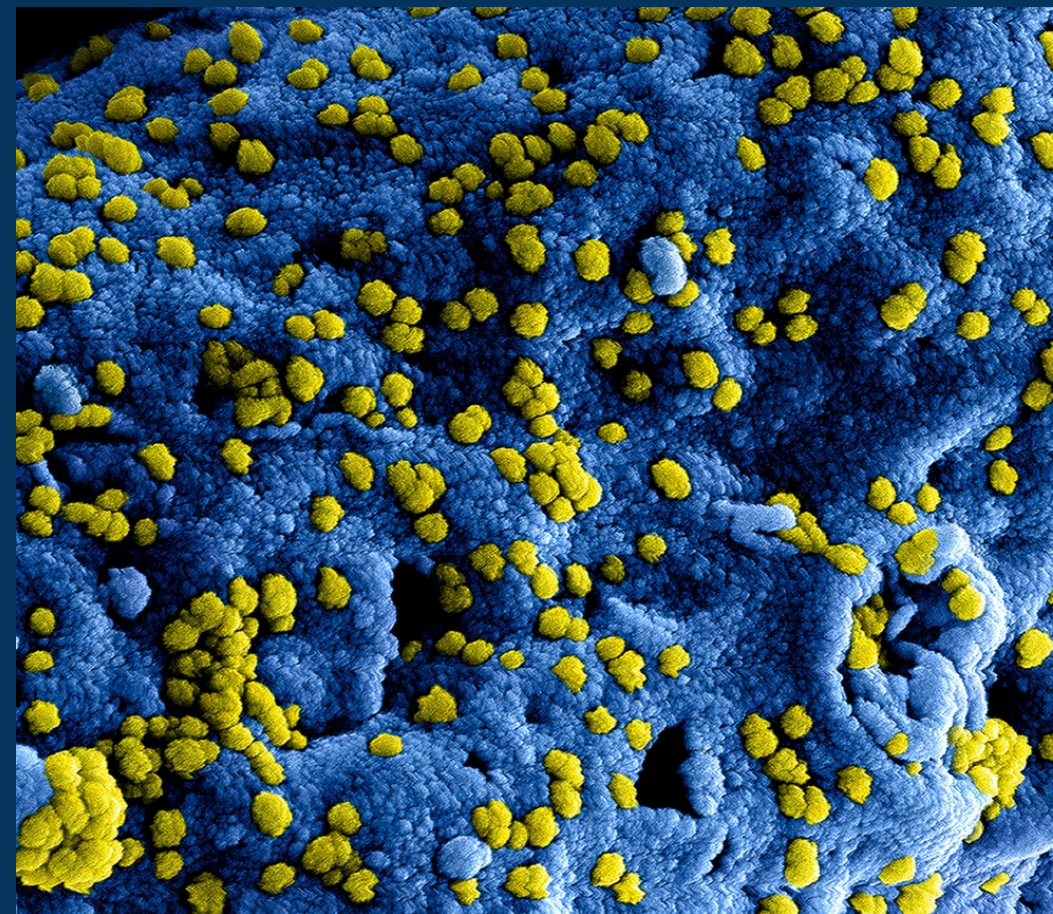
- Volcanoes spew out hot, acidic lava!
- The inside of a volcano is under a lot of pressure!



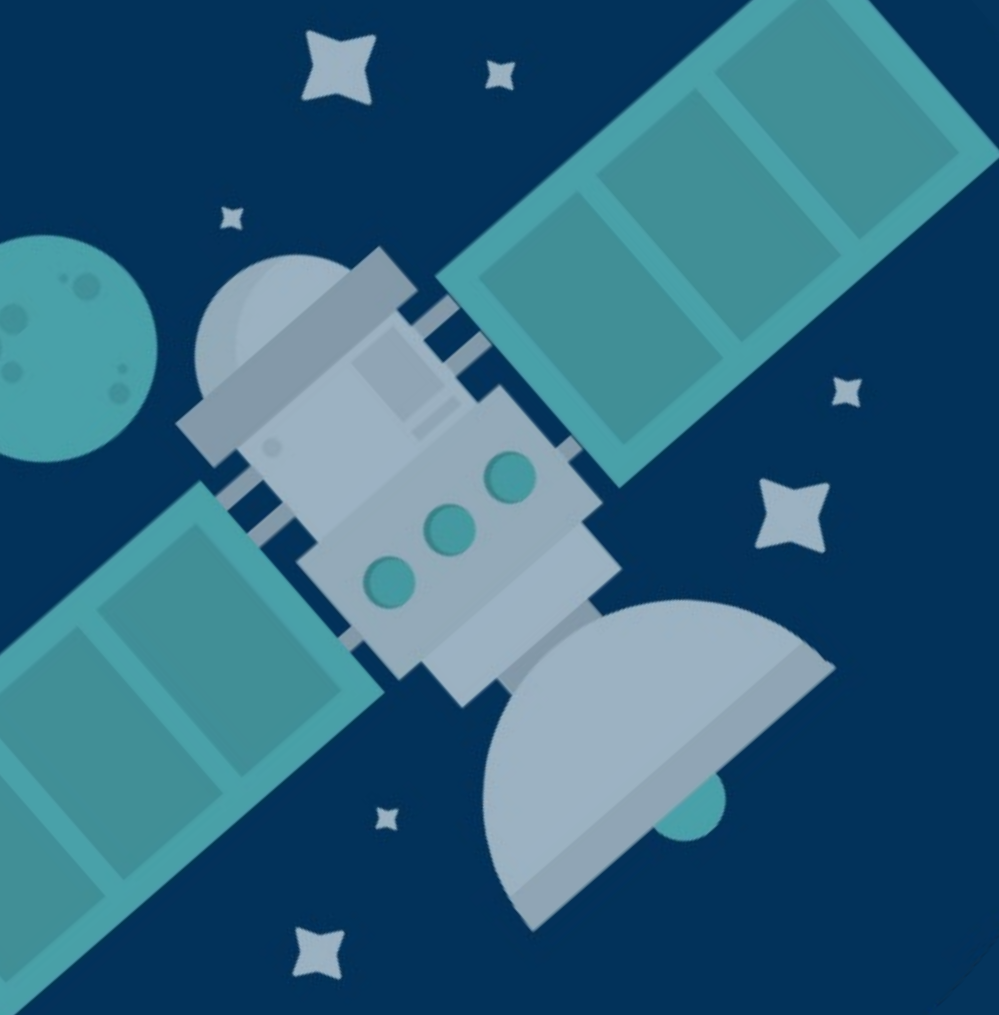


WHAT ABOUT MICRO-ORGANISMS?

# 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!).