

# The Moon



Our satellite - What's it like?

No Atmosphere - that's pretty easy. Or is it?

Daytime temperature = 400 K (266 F)

Nighttime temperature = 100 K (-280 F)

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# Surface Features

\_\_\_\_\_ - dark, smooth regions

\_\_\_\_\_ - lighter colored, rough terrain

“Mountains”

Volcanic features

And lots of craters.....

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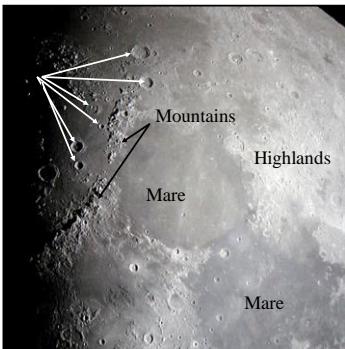
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Craters



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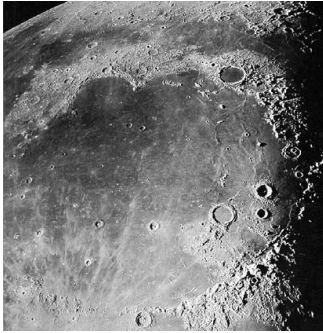
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Mare - circular edges  
What are they?



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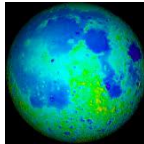
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Areas without mare  
Heavily cratered  
highlands



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Impact made basin (big crater)  
Lava filled basin → Mare  
Later impacts  
Mare are younger (newer) than  
highlands



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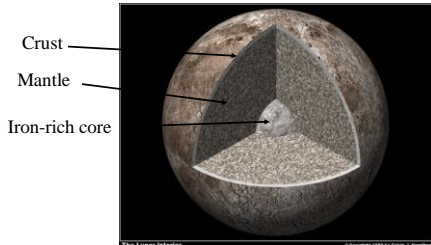
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## Structure of the Moon

Composition of the Moon similar to the \_\_\_\_\_  
Very little metal (iron, nickel), mainly rock



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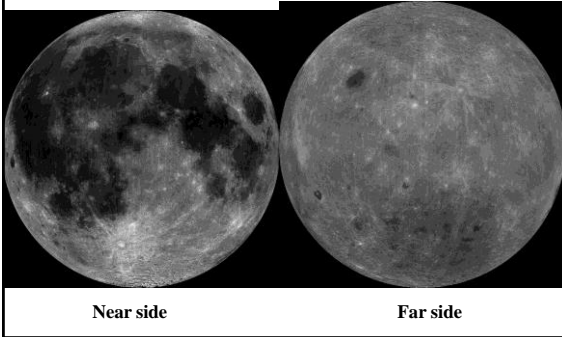
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## Lunar Crust



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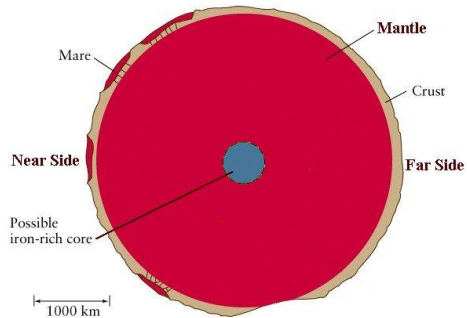
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\_\_\_\_\_ on Near Side allows formation of Mare



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## Tidal Effects

Tidal effects - gravity

Moon pulls Earth ⇔ Earth pulls Moon

Moon's pull ⇒ \_\_\_\_\_

Earth's pull ⇒ \_\_\_\_\_ ⇒ \_\_\_\_\_

Moon's pull ⇒ \_\_\_\_\_

Earth's pull ⇒ \_\_\_\_\_ ⇒ \_\_\_\_\_

Far in the future:

The Moon will be \_\_\_\_\_

Earth and Moon \_\_\_\_\_

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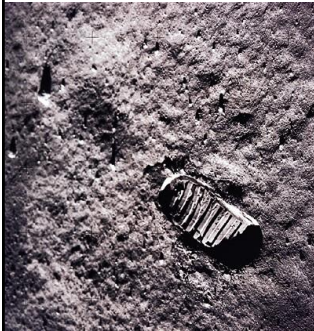
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### **Apollo Mission**

6 lunar landings

12 people walked on the Moon (and played golf)

850 pounds of rocks

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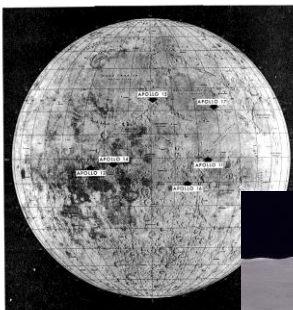
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All near side landings

[Lunar rover](#)




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## Lunar Rocks



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## Origin of the Moon

Possible scenario - the [Impact Theory](#)

History of the Moon

- 4.5 billion years ago - Moon formed (after Earth)
- 4.5 - 4 b.y.a. - large impacts formed basins
- 3.5 - 3 b.y.a. - basins filled with lava forming mare
- 1969-1972 - *Apollo* missions
- 2009 – today - New studies (any water?)

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