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)

Surface Features

_____________ - dark, smooth regions
_____________ - lighter colored, rough terrain

“Mountains”
Volcanic features
And lots of craters……..
Mare - circular edges
What are they?

Areas without mare
Heavily cratered highlands

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

Composition of the Moon similar to the ____________

Very little metal (iron, nickel), mainly rock

Iron-rich core

Mantle

Crust

Lunar Crust

Near side

Far side

_________________ on Near Side allows formation of Mare
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 ______________

Apollo Mission
6 lunar landings
12 people walked on the Moon (and played golf)
850 pounds of rocks

All near side landings
Lunar rover
Lunar Rocks

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?)