**The Moon, Our Nearest Neighbor.**

It would be difficult to ignore the most visible object in the night sky- the Moon. It has long been the object not only of scientific speculation, but of poetry and song as well. In some ways, the Moon resembles the Earth. They are both spherical and have a crust and mantle made of rock. The Moon may also have an iron core like the Earth, although it is probably much smaller.

The astronauts who visited the Moon, however, were more impressed by the differences between the Moon and the Earth. For one thing, they found the Moon an inhospitable environment with no evidence of any living things. The Moon has no atmosphere to shield it from the Sun’s radiant energy or to help hold in heat during the night. This causes wide fluctuations in temperature. During the day, the temperature ont eh Moon’s surface rises to above 100 degrees Celsius; during the night, it drops below -170 degrees Celsius. There is also no water on the Moon. Its surface features, therefore, have not been changed by wind or water as the Earth’s have been. Most of the features that can be seen on the Moon today—craters and lava fields – have been there since its early history.

The Moon is not free from all change, however. The lack of an atmosphere allows the surface to be hit constantly by small particles from space. This bombardment breaks up some of the rocks on the surface. Since the small pieces of rock are not washed or blown away, a fine dust covers almost all of the Moon’s surface.

Lunar Origins- It is unusual for a planet to have a moon so big compared to its own size. The diameter of the Moon is about one-fourth the diameter of Earth. It is unlikely that the Moon was once part of the Earth because too many differences have been found in the chemical makeup of the two bodies.

The moon formed about 4.5 billion years ago, about 30–50 million years after the origin of the Solar System, out of debris thrown into orbit by a massive collision between a smaller proto-Earth and another planetoid, about the size of Mars.

