



# The Hadean Time

By

Doug Mann

The Hadean time was the time of the beginning of the earth. It started about four and a half billion years ago.

The earth was created shortly after the birth of our sun. Because it came from the same stuff as the sun it was very hot. Nothing was solid.

Because the earth flew away from the sun into space it began to cool. This took a very long time. As it cooled the surface could harden into rock. When things cool down they shrink a little bit.

The inside of the earth was still very hot. It was so hot that it was still liquid. This hot liquid earth is called magma. When the crust of the earth cooled it forced this magma to come out of cracks in the hardening crust.

That is what a volcano is. A crack in the earth's crust with magma coming out. When magma gets to the surface it is called lava.

During the Hadean Time there were lots of volcanoes erupting all the time. They helped to build up the crust. Lava was not the only thing that came out of the volcanoes. There was smoke and ash, and gases. The gases were hydrogen, nitrogen, oxygen, methane, and others. The hydrogen and oxygen mixed together and formed something new, water!

And so it began to rain on earth. This time of volcanoes lasted for a long, long time. Volcanoes, lava, smoke, and rain, these are the things that made up the time of the Hadean.

It took millions and millions of years for the earth to cool down. Finally it did cool down enough that only a few volcanoes were erupting at a time. What do you think happened to all that rain? It created the oceans!