

Understanding Our Surroundings

How many of you live with nature? or walk on the beach, track on the river or walk in the forest and climb on a mountain? Have you ever gone into a cave? Do you camp ? Are you interested in colourful stones, or in collecting stones and shells on beach? Did you think why so many different rock exist? All of us like to watch a landscape. And everyone love to go to nature now... Did you go to the Abant Lake or Uludağ Mountain? or go to a trip along the Black Sea coast? After you come home from a trip to Aegean or Mediterranean, if you take pictures and look at them, you realize how beautiful our land and our Earth is... These are the beauties that Earth gives us. There is another face of the Earth, bad side. Think about old stories! In ancient times, when an earthquake happens or a volcano explodes in ancient times people used to think that Gods were angry...

Have you ever thought that how these happened before? After seeing the movie Jurassic Park, did you think what happened to dinazors ? Did dinazors live in Anatolia? Any of us have sailed far from shore that we could no longer see land then wonder where all that water came from? You may wonder how the landscape came to be. Was the Earth same as today? Have you ever thought that the Earth has an age? Well, earth scientists study all these questions and physical activities because our planet, the Earth, does not stand still. The Earth is a living system, a giant thermal machine...

The Solid Earth System component of the The Earth System series provides an integrated view of the lithospheric component of the Earth.

The Solid Part of the Earth System

The Earth does not stand still. According to theory of plate tectonics, the Earth's outer part is broken into a series of plates. Adjoining plates may slide past, move away from, or collide with one another. Remember the 1999 earthquakes in Kocaeli. One such movement took place along the North Anatolian Fault. It shook violently. Fourtyfive seconds later it stopped. The entire region suffered severe damage as buildings and lives were severely destroyed.. The damage was on the western branch of NAF. In most places and landslides were triggered by the quake. The most severe damage was to older structures and those built on bay fill (soil or unconsolidated sand and clay). Non of the high buildings were demaged because they were built to meet high quake-resistant standards-the result of engineers studying the effects of countless earthquakes worldwide. Unconsolidated sediment, such as bay fill, amplifies an earthquake's waves, Physical geology is the large division of earth science concerned with Earth materials, changes in thge surface and interior of the earth, and the dynamic forces that cause those changes... We will look at how the Solid Earth System works and then show how some of major topics of Earth science are related to the to the surficial (on the Earth's surface) and internal processes powered by the giant earth machine..