## G i f u i va x 133 – group Turg`unboyev I.I.

Soil

**Soil** is a <u>mixture</u> of <u>organic matter</u>, <u>minerals</u>, <u>gases</u>, <u>liquids</u>, and <u>organisms</u> that together support <u>life</u>. <u>Earth</u>'s body of soil, called the <u>pedosphere</u>, has four important <u>functions</u>:



## Soil

The pedosphere interfaces with the <u>lithosphere</u>, the <u>hydrosphere</u>, the <u>atmosphere</u>, and the <u>biosphere</u>. The term <u>pedolith</u>, used commonly to refer to the soil, translates to <u>ground</u> stone in the sense "fundamental stone". Soil consists of a solid phase of minerals and organic matter (the soil matrix), as well as a <u>porous</u> phase that holds gases (the soil atmosphere) and water (the soil solution). Accordingly, soil scientists can envisage soils as a three-<u>state</u> system of solids, liquids, and gases.



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Soil is a product of several factors: the influence of <u>climate</u>, <u>relief</u> (elevation, orientation, and slope of terrain), organisms, and the soil's parent <u>materials</u> (original minerals) interacting over time. It continually undergoes development by way of numerous physical, chemical and biological processes, which include weathering with associated erosion. Given its complexity and strong internal connectedness, soil <u>ecologists</u> regard soil as an ecosystem.









Most soils have a dry <u>bulk density</u> (density of soil taking into account voids when dry) between 1.1 and 1.6 g/cm<sup>3</sup>, while the soil <u>particle density</u> is much higher, in the range of 2.6 to  $2.7 \text{ g/cm}^3$ . Little of the soil of planet Earth is older than the Pleistocene and none is older than the Cenozoic, although <u>fossilized soils</u> are preserved from as far back as the Archean.

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<u>Soil science</u> has two basic branches of study: <u>edaphology</u> and <u>pedology</u>. Edaphology studies the influence of soils on living things. Pedology focuses on the formation, description (morphology), and classification of soils in their natural environment. In engineering terms, soil is included in the broader concept of <u>regolith</u>, which also includes other loose material that lies above the bedrock, as can be found on the Moon and on other celestial objects as well. Soil is also commonly referred to as **earth** or <u>dirt</u>; some scientific definitions distinguish *dirt* from *soil* by restricting the former term specifically to displaced soil.



Thank you for attention.