

Soil

Is a living thing!



What does soil do?

Soils are the base for growth of all kinds of plants.

Soils effect the atmosphere by giving off and absorbing gases, such as carbon dioxide, methane, and water vapor.

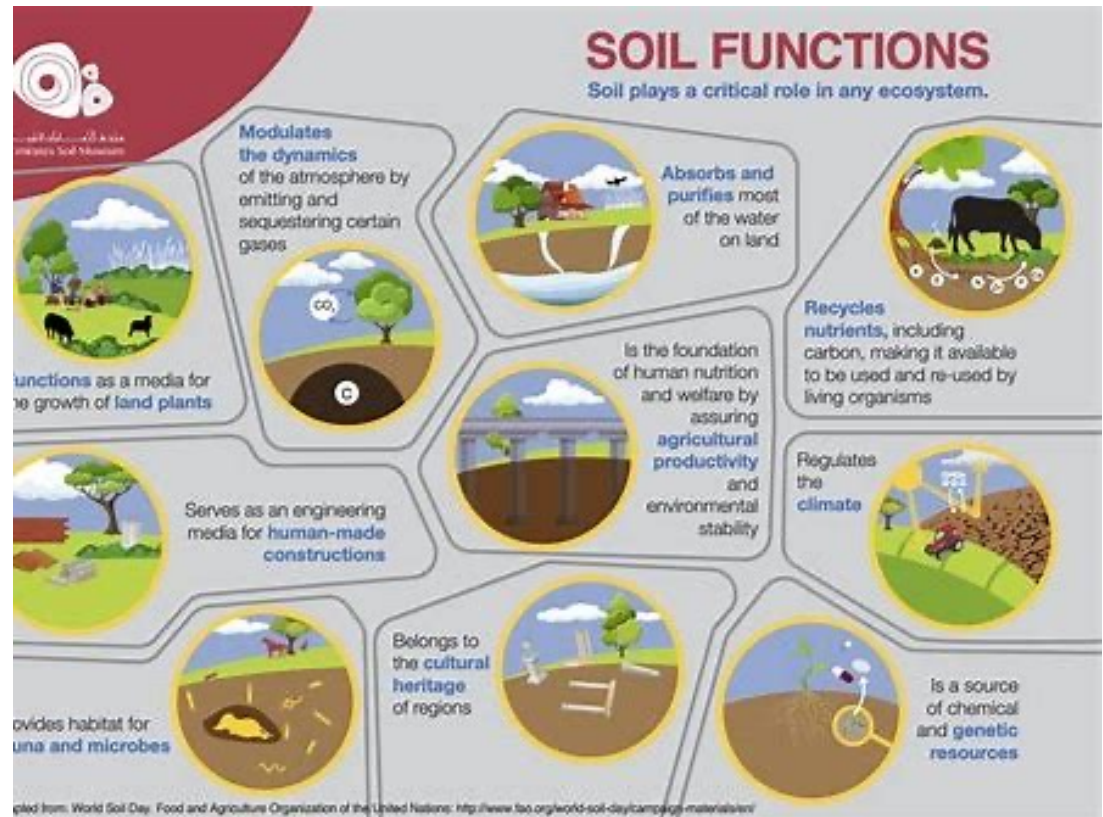
Soils provide habitat for animals, and organisms.

Soils absorb, hold, release, alter, and purify water in terrestrial systems.

Soils process recycled nutrients.

Soils are the base for foundations, roadbeds, dams and buildings.

Soils filters water before it moves into an aquifer.



Soil horizons/profile

Soil Profile

Different kinds of soil have their own sets of characteristics. Soil is made of layers, or horizons (O, A, E, B, C, R) and together, and they form a soil profile. Most soils have three major horizons (A, B, C) and some have an organic horizon (O).

O - (humus or organic) Mostly organic matter such as decomposing leaves.

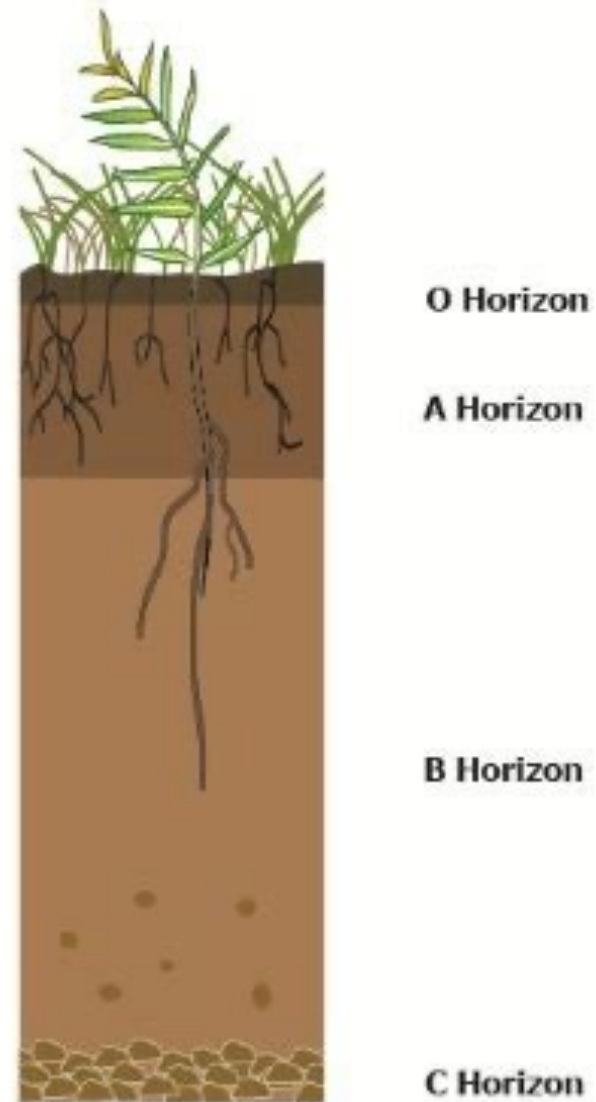
A - (topsoil) Mostly minerals from parent material with organic matter incorporated.

E - (eluviated) Leached of clay, minerals, and organic matter, leaving a concentration of sand and silt particles of quartz or other resistant materials.

B - (subsoil) Rich in minerals that leached (moved down) from the A or E horizons and accumulated here.

C - (parent material) The deposit at Earth's surface from which the soil developed.

R - (bedrock) A mass of rock such as granite, basalt, quartzite, limestone or sandstone that forms the parent material for some soils.

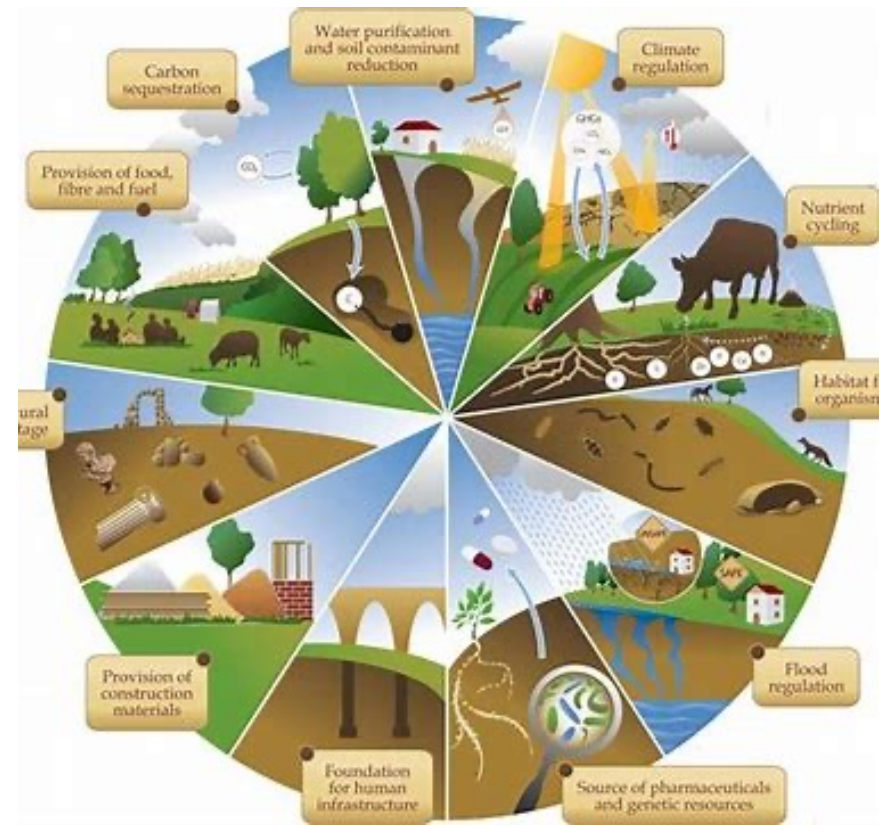


What is soil?

<https://www.soils4kids.org/about/>

The formal definition of soil as defined by the Soil Science Society of America Glossary of Soil Science Terms, is:

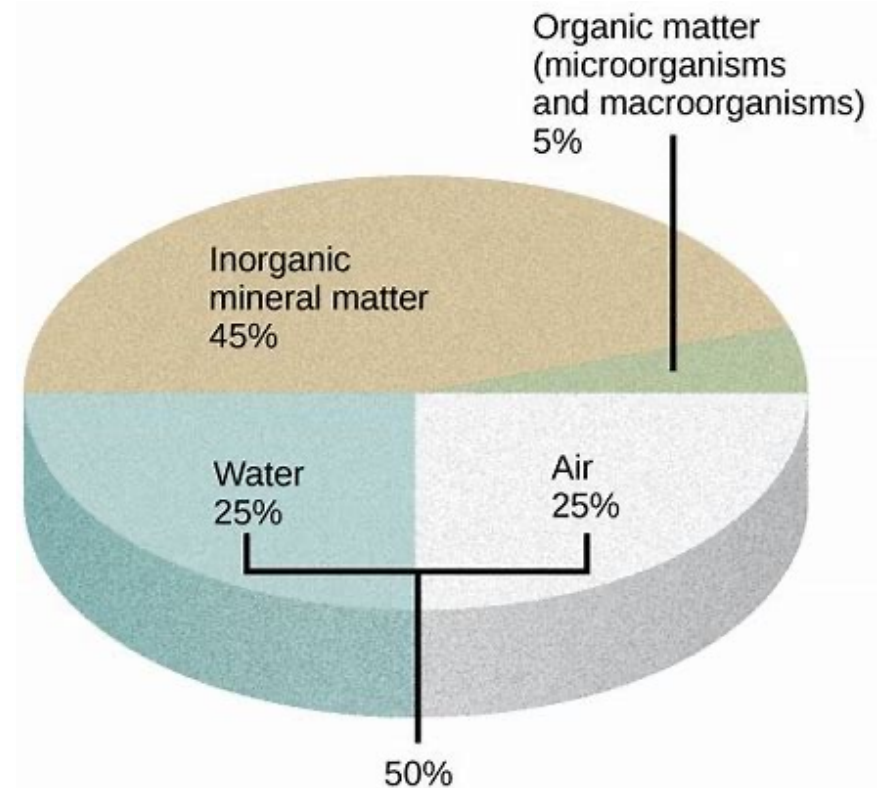
The unconsolidated mineral or organic material on the immediate surface of the earth that serves as a natural medium for the growth of land plants.



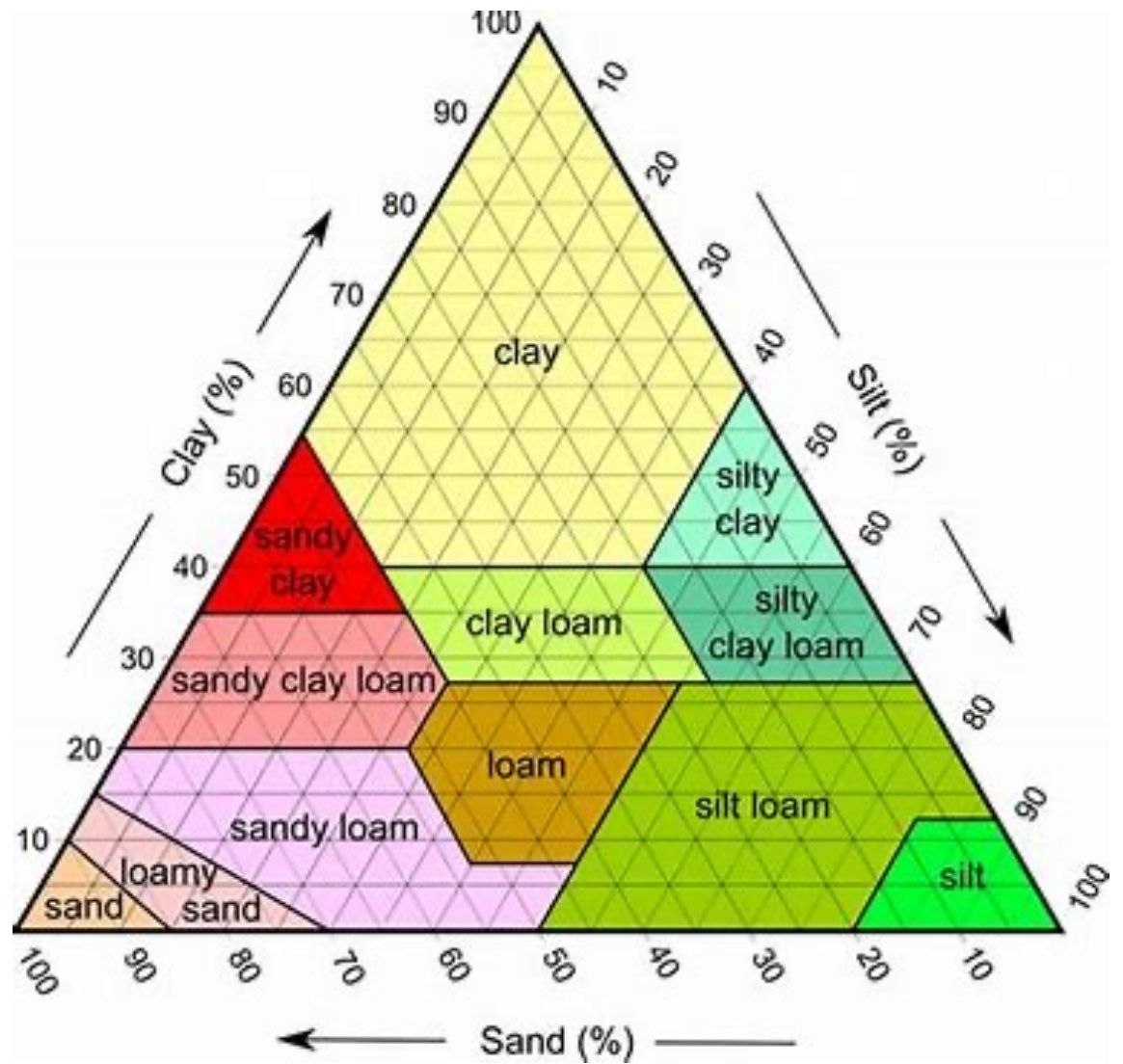
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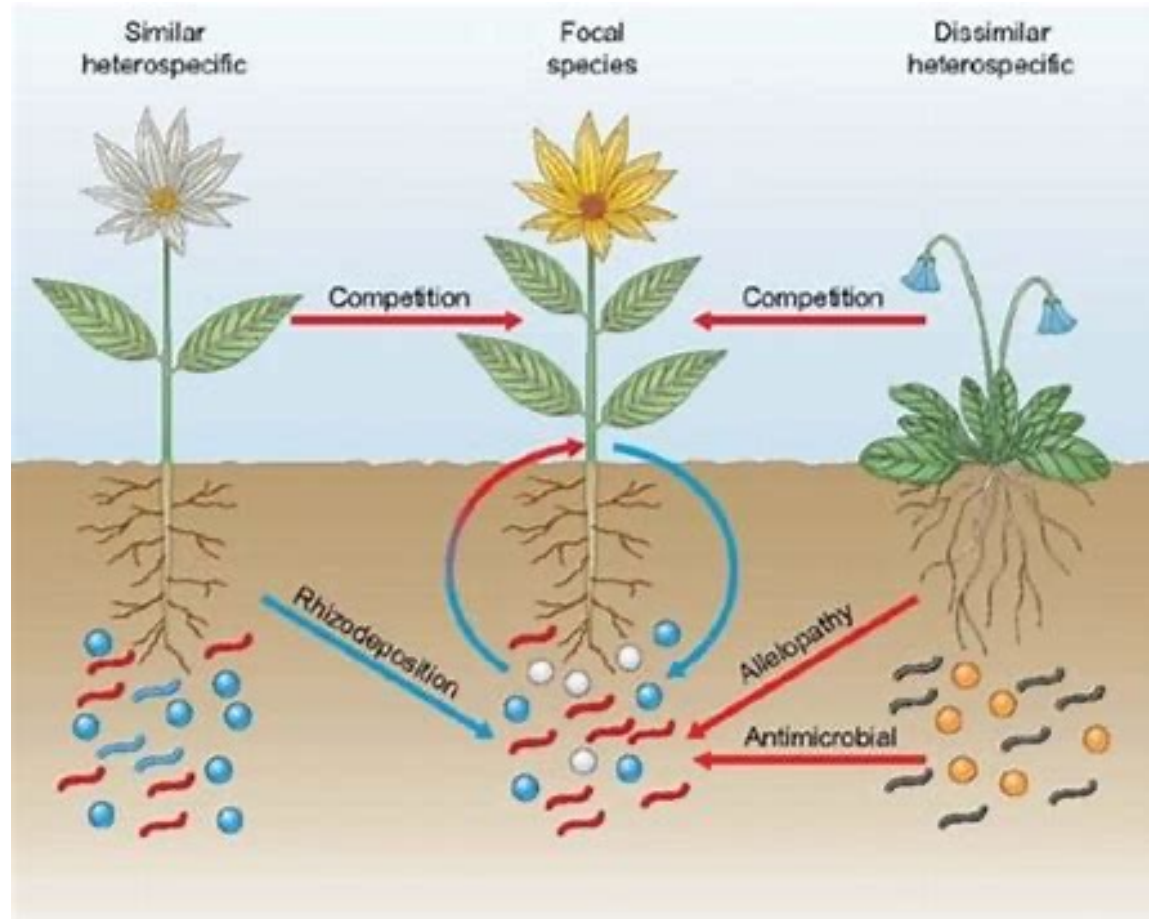
Soil is a mixture of minerals, water, air, organic matter, and organisms, decaying remains of once-living things, forming at the surface of land.



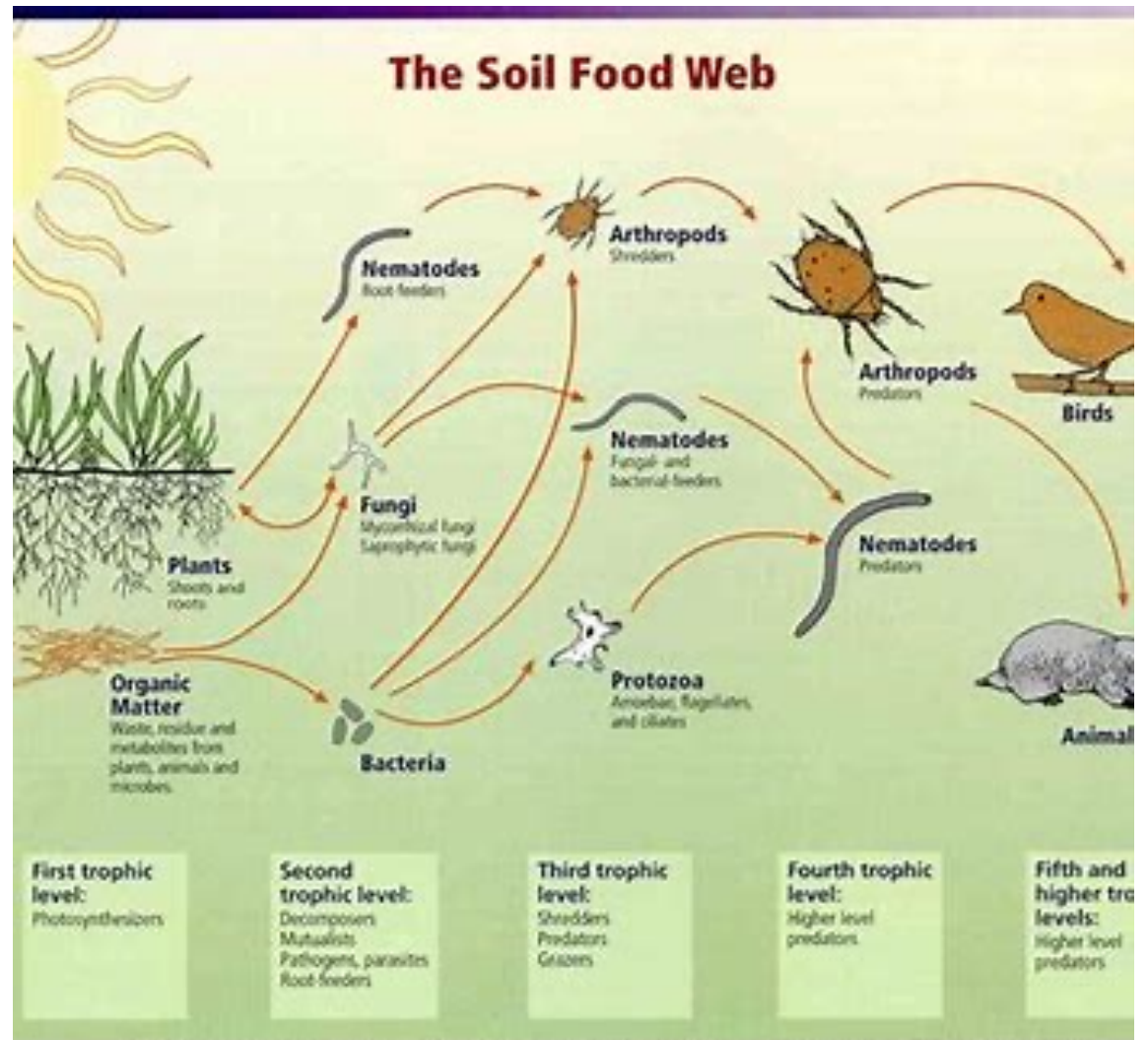
Soil
mineral/chemical
matter



Soil plant matter



Soil animal matter



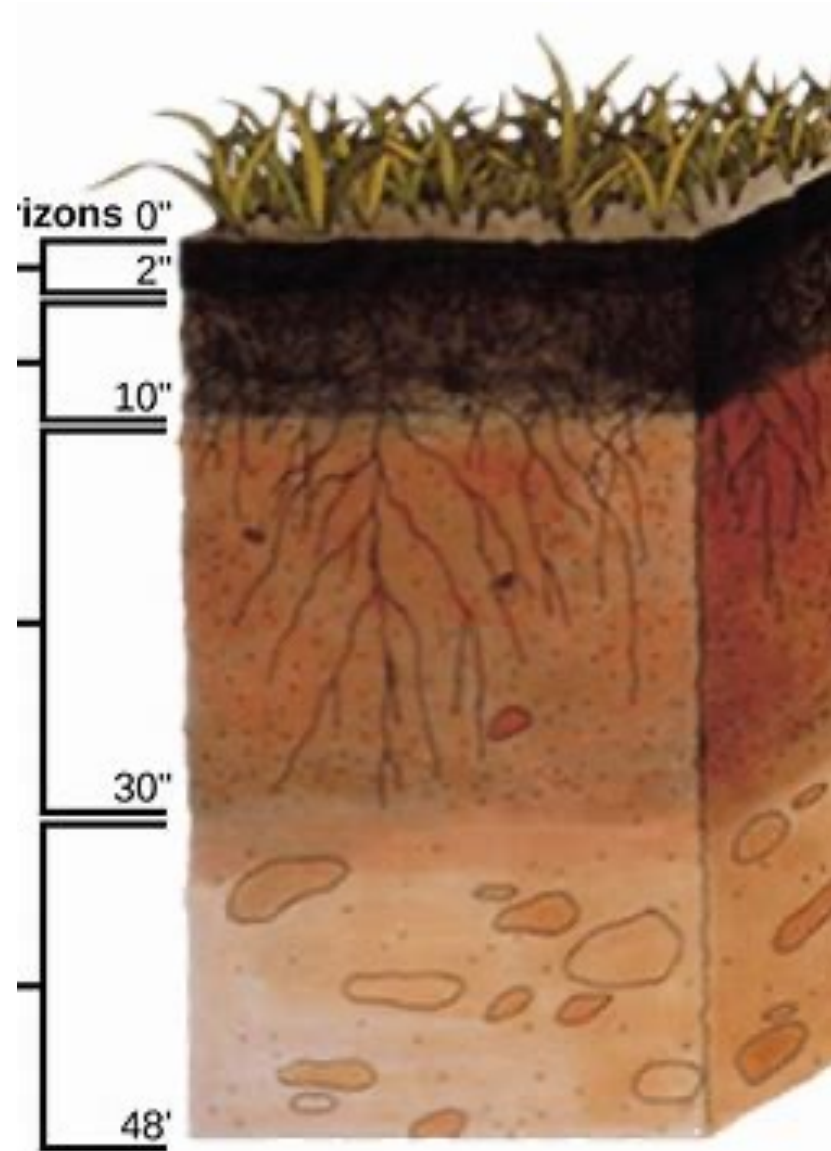
Relationships between soil food web, plants, organic matter, and birds and mammals
Image courtesy of USDA Natural Resources Conservation Service
http://soils.usda.gov/sqi/soil_quality/soil_biology/soil_food_web.html.

Sing a song of soil to *Mary Had a Little Lamb*

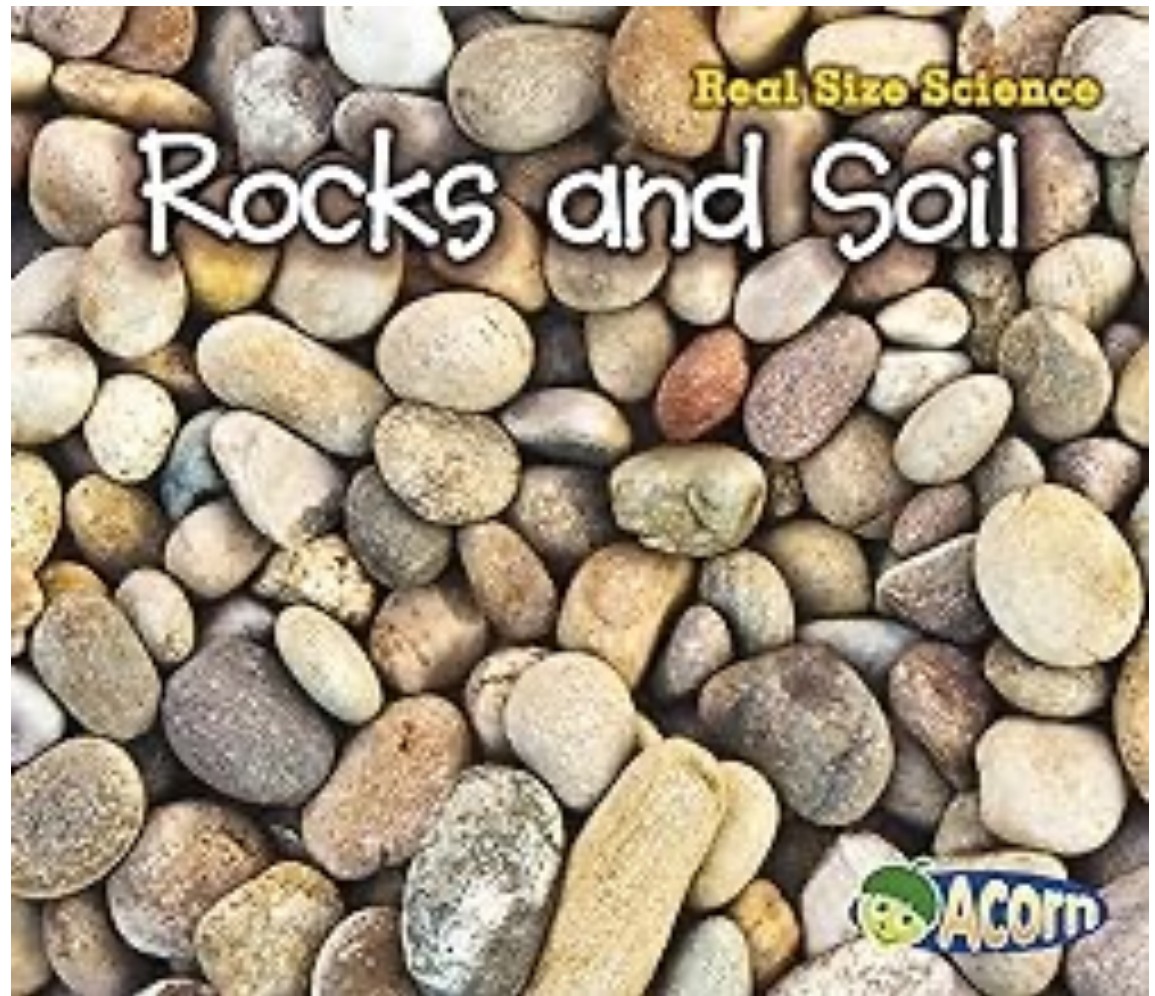
Soil is made of many
things, many things,
many things,

Fungus, bacteria,
protozoa brings

The life to healthy soil!



This book shows soil components and rocks in real size.



This book connects what is happening in the soil, to what grows in the garden.

