

Let's
Learn
about

Soil

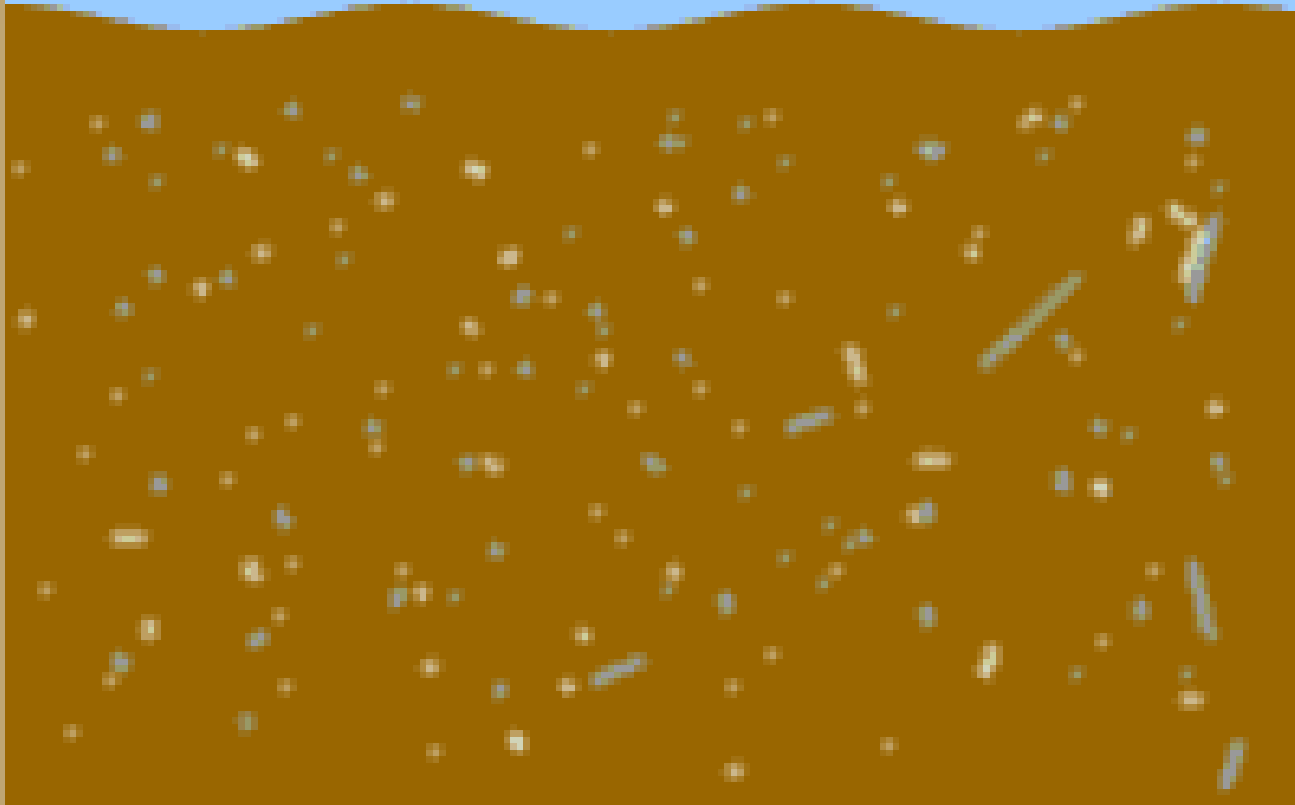
Jessica Hogarth

What is soil?



- The loose material in which plants can grow in the upper layer of Earth

Soil is made of...



Soil is a Resource

- Resource

- A material found in nature that living things use

- Water

- Air

- Trees

- Minerals

Humus


- The part of soil made up of decayed parts of once-living things
- Dark and soft
- Contains much of what plants need to grow

Three Layers of Soil

- Topsoil 
 - Top layer
 - Richest soil



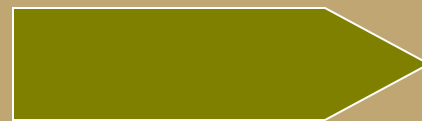
Three Layers of Soil

- Subsoil 
 - Under topsoil
 - Larger grains and less rich than topsoil



Three Layers of Soil

- Bedrock
 - Solid rock under soil
 - Weathering breaks down bedrock into soil



Why is Soil Important?

- All living things need minerals.
 - Plants get minerals from soil.
 - Plant-eating animals get the minerals from the plants that they eat.
 - We get minerals from the plants and animals that we eat.

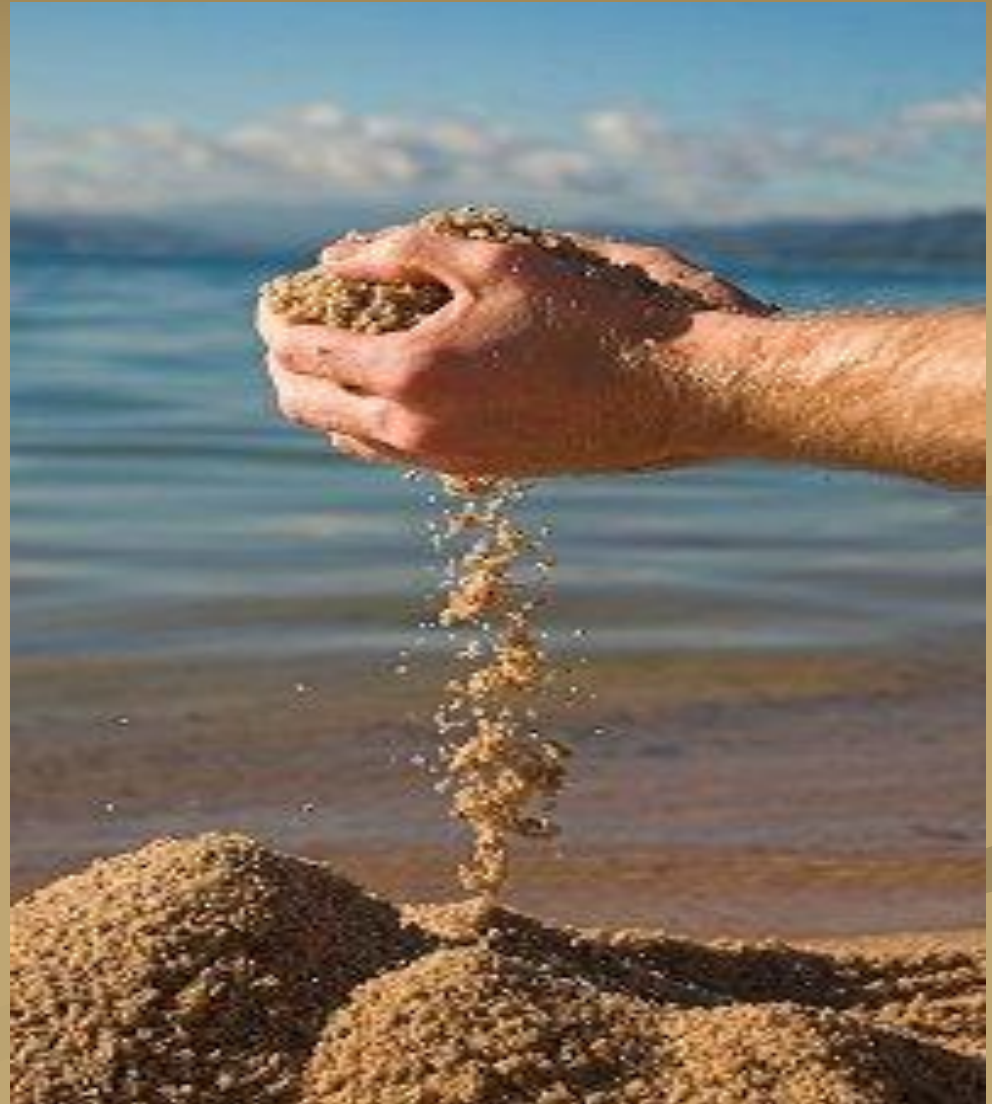
Different Types of Soil

- Soil can be black, brown, gray, red, yellow, or white.
- Color depends on what types of minerals are in it
 - White soils form from light rocks, such as limestone.
 - Black soils have lots of humus.



Different Types of Soil

- Sand has large grains and feels gritty.
 - Large spaces between the grains let water leave it quickly.
 - Too dry for plant growth



Different Types of Soil

- Clay



- Very small grains that form hard clods when dry
- Small grains hold water easily, which makes it sticky.
 - Dry clays are too hard, and wet clays are too soggy for plant growth.

Different Types of Soil

- Loam has small grains.
 - Holds enough water for plants but also drains well



Check this out . . .

- Visit the Discovery School site to learn more and play Soil Safari!!

Then, come back for more!

What Harms Soil?



- Planting the same type of crop year after year
- Cutting down too many trees
- Wind and water

Saving Soil



- Conservation
 - Saving resources by using them carefully
- Strip cropping
 - Planting strips of thick grass or clover between strips of crops



- Contour plowing

- Planting rows of crops around the sides of hills. . .

instead of up and down

What have you learned about soil?

- What are the three layers of soil?
 - Topsoil
 - Subsoil
 - Bedrock
- Name and describe some types of soil.
- What can be done to conserve soil?
- Want to learn more???

Bibliography

Bettany, J. (n.d.). *The dirt on soil*. Retrieved October 27, 2006, from http://school.discovery.com/schooladventures/soil/down_dirty.html

JP. (2006, March 21). The premiseless imperative VI: Scattered brains are better brains [Msg 6]. Message posted to <http://www.snant.com/fp/archives/category/premiseless-imperative/>

Lipke-Vigessa (Producer). (2005). *The emptying out of the plains* [Motion picture]. (Available from The North Dakota Museum of Art, 261 Centennial Drive Stop 7305, Grand Forks, ND 58202).

(n.d.). *PC USA*. Retrieved October 27, 2006, from <http://www.pcusa.org/stewardship/clipart-varieties.htm>

(2003). *Plot sales UK*. Retrieved October 27, 2006, from <http://www.plot-sales-uk.co.uk/soil-types.asp>

(n.d.). *Rocket gardens*. Retrieved October 27, 2006, from <http://www.rocketgardens.co.uk/showdetails.asp?id=271>

Bibliography (cont.)

(n.d.). *Rootblast*. Retrieved October 27, 2006, from <http://www.rootblast.com/research.html>

Scoones, S. (n.d.). *Global eye*. Retrieved October 27, 2006, from http://www.globaleye.org.uk/secondary_spring01/eyeon/soil_erosion.html

Stack, G., Wolford, R., & Scherer, J. (n.d.). *The great plant escape*. Retrieved October 27, 2006, from <http://www.urbanext.uiuc.edu/gpe/case2/c2facts2.html>

Steketee, D. (n.d.). *Center for sustainability at aquinas college*. Retrieved October 27, 2006, from <http://www.centerforsustainability.org/resources.php?root=243&category=254>

(2005). *Trek earth*. Retrieved October 27, 2006, from http://www.trekearth.com/gallery/Middle_East/Turkey/photo417871.htm

Wolford, R., Stack, G., Scherer, J., & Hawley, M. (n.d.). *My first garden*. Retrieved October 27, 2006, from http://www.urbanext.uiuc.edu/firstgarden/basics/dirt_04.html