

Soil Activities: A four letter word that is super dirty.

Objectives

- Define soil.
- Investigate soil related careers.
- Determine a soil's texture.
- Understand healthy soils.
- Identify a state's soil and its taxonomy.

Importance of Understanding Soils

Soil is the foundation of life's party. Plants, animals, food, clothing, and shelter all arise from the soil. Everybody and everything wants or needs to have a relationship with soil (think of soil as the Homecoming King). The moral of the story is that without the soil that we walk on there never would be any grass between your toes or a flower to give on a first date or a piece of lettuce to get stuck in your teeth on that same said date. It is time to get to know soil a little bit more intimately. Follow this lesson and your love for soil will surely bloom.

Who's That Soil? What's That Soil Job?

Madonna once sang, "Who's that girl?" Just change one little word and "Who's that soil?" could have been a number one hit in the 1980's. What is soil? Who is soil? Do you even want to know about soil? Soil is so much more than sediment that stains clothes and creeps onto carpets. It is the stuff that makes miracles happen! Miracle Gro is a fertilizer that is applied to the soil so you could say that soil is where miracles happen. A stretch? You be the judge.

Speaking of judges, no not Judge Judy, there are actual soil judges. There are actually tons of careers related to soils. Explore some of these careers and see if any of them could be a future opportunity for you to make some Benjamins while leading a fulfilling life in soil science.

1. Go to <http://www.soils4kids.org/about>. Check out some great information about soil.
2. Go to the EPA.gov site about soil facts. Click on: <http://www.epa.gov/gmpo/edresources/soil.html>.
3. Explore some wicked careers. Go to a search engine and type in "Soil Career Posters" or click on <http://soils4teachers.org/files/about-soils/soil-career-poster.pdf>.

Questions

1. What is the difference between soil and dirt?(Use the first link)
2. List what you felt were the five most important facts about soil. (Use the second link)
3. Who and what is a soil scientist?
4. How do you become a soil scientist?
5. What are five skills you may need in soil science?

Soil Texture Activity

It's time to get dirty (bust out the Christina Aguilera song and start jammin', too). Go outside and find some soil. Do not go into the sandbox and whatever you do stay away from any cat poop in the sandbox. Find a spot of grass or a garden-like area. If you find bones, call the police or an archaeologist immediately.

1. Use a trowel, a miniature shovel, or something else that can dig into the top 6" of soil. Do not use the top 1" of soil, but take a scoop that can fit into your hand and place it into a container or a bag.
2. Go to YouTube and search for a video titled "Soil Texture by Feel," by UC Davis IPO. Load this video and get ready to rumble.
3. Grab a spray bottle with some water or just a glass of water will do.
4. You will create a ribbon of soil and you will need to measure this ribbon of soil with a ruler.

5. Watch the video and determine what soil texture you have in your lawn or garden area by following the video.

Questions:

1. What type of soil texture do you think that you have? Why?
2. Hypothesize if you think this soil would be good for growing plants? You could cheat and remember where you got the plants from... were there a lot of plants livin' the life?
3. Determine what the best soil texture is for growing plants. Go to: <http://nebeginningfarmers.org/farmers/land/land-environment-facilities-tutorial/know-your-soils/soil-structure-texture/>. What texture is the best for growing plants and why?
4. What do you think would need to change in your soil sample to make it the ideal soil texture for growing plants?

Healthy Soils

What is a healthy soil? Discover what pedologists consider a healthy soil and then go outside and start digging. For your information, soils do not get viruses. There are soils that are considered "healthy" if they have certain characteristics that you are about to explore. Move over Jacques Cousteau, oceans and you got nothing on this li'l soil explorer.

1. Watch the Soil Health Video from the Natural Resource Conservation Service (like the US Secret Service, but for soil). Use a search engine on the internet and look for "NRCS Soil Theatre." These are some really dirty videos. Go to the NRCS site and then click on the video titled "**How should healthy soils look?**" and "**How should your soil smell?**" Watch these until your eyeballs burn, about two minutes.
2. Go outside with your shovel and inspect your soil for health. Check out the soil's structure and also give it a whiff. Make some observations.

Questions:

1. How does your soil compare to the healthy soil sample from the video? Is it the same or different? How?
2. What does your soil sample smell like? Compare it to something that you are familiar with?
3. Would you consider your soil healthy? Why or why not?

Identify Your State's Soil

Every state has something to be proud of. Raise the roof for your soil. Each state has a soil that makes them swell with pride. Every state except for New Jersey should be proud. Who names a state soil "Downer?" Maybe "Upper" would work but not "Downer." What a bummer! What is your state's soil and what are its characteristics or taxonomy?

1. Go to a search engine on the internet and search for "NRCS State Soils" or go to: <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/edu/?cid=stelpddb123684>.
2. Find your state's soil and click on the link.

Questions

1. What is the name of your state's soil?
2. What are three identifying characteristics of this soil?
3. What is commonly grown or housed on this soil?
4. List one extremely exciting fact about this soil that your state has called its own.
5. Now that you have gone out and looked at your soil, do you think that your soil is the same as your state's soil?

Bring It All Back

There it is. You have an introduction to what soil is, its texture, health, and of course who and what your own state soil is. You should feel like a rock star, literally... you learned a lot about tiny little rocks today. Get ready for Jeopardy or another trivia game because you have a wealth of pedological knowledge. You are dangerous!