

What is soil?



Soil

(Additional Information for 2014 NH Soil Judging & Contest)

What is soil? The answer depends on who you are asking. In engineering and construction, soil is the usual name for earth that can be excavated without blasting. Geologists commonly use the term soil for a layer of weathered, unconsolidated material on top of bedrock. To soil scientists, soil is an unconsolidated mixture of mineral and organic material at the surface of the earth that serves as a natural medium for growing plants.

Most soils take a very long time to form. They form from rocks and sediments (parent materials) that have disintegrated and decomposed through the action of weather and organisms. The five factors that control the formation of soils are:

- Climate
- Organisms
- Topography (slope, aspect, relief)
- Parent Material
- Time

As mentioned above, soils perform many functions that are important to all of us. A healthy soil performs five critical functions. Soil:

- Filters and cleans our water
- Acts as a medium for plant growth and habitat for organisms
- Stores and regulates water flow
- Is an engineering/structural medium
- Helps recycle nutrients and organic materials

Contest Day:

All teams are to report to the registration area to receive event information and agenda.

The day will begin with a sample soil pit to help students understand the questions they will be asked, and what types of answers are being sought. Students and teachers may compare notes at the sample pit. Once teams have left the sample pit area team members must refrain from talking to other team members, other teams, and to their teachers about the soils.

At each of the official test pits students will first be tested on their knowledge of the soil and then be given a review of the soil pit during which time they will be given the opportunity to ask questions. This format ensures that students will learn throughout the day. Students will be permitted to use the Soil Judging Manual (available on-line at <http://www.belknapccd.org/category/events/> throughout the contest. Students are not permitted to talk to other students during the test unless otherwise instructed by the staff conservation educator at the pit.

Thank You for your interest in our program!!

2014 Soil Judging Contest Rules: (revised Sept. 6, 2013)

1. Teams will consist of four students.
2. Schools may have any number teams participating but only teams of four will be scored as a 'competing team'. Teams of three or individual students will only receive individual scores.
3. Team and individual scores will be electronically sent to the designated contacts the week following the competition. Certificates will be US Postal mailed within two weeks of the event.
4. A teacher or an advisor must accompany teams but must not assist the students.
5. Four soil profiles (pits) will be judged.
6. Students and teachers should not converse or help each other in any manner during the judging at the pits or the walks between the pits. (An exception is made when it is necessary for two students to measure slope or distance between surface stones.)
7. A section of the soil profile will be marked in each pit for students to observe. Please do not disturb this section so that the students following can also observe this undisturbed profile.
8. Students will be expected to make some of their soil observations in the soil pit.
9. Two stakes will be set in the ground near each soil pit for students to observe. Please do not disturb this section so that the students following can also observe this undisturbed profile.
10. One scorecard will be complete for each soil profile. Scorecards will be turned into the soil pit monitor for scoring after the allotted time (generally 20 minutes per profile for judging).
11. Scorecards will be give to each student when they arrive at the soil pit to be judged.
12. To alleviate congestion in the soil pit, samples of each off the (three) soil layers will be provided for students to determine texture.
13. The soil surface (from which depth measurements are made) will be indicated at each pit. Also indicated will be the breaks between the three soil layers.
14. Schools from out of state are invited to compete in this contest. All participants will be receive a certificate of participation; high scoring teams and students will receive an additional certificate.
15. The contest will be held regardless of weather. There will be no rain dates.
16. Students are permitted to use the Soil Judging Manual during the contest.
17. There is no registration fee.

Please bring the following items to the contest (if they are available to you):

Mandatory

- A copy of the Soil Judging Manual for every student.
- Clipboard, pen, pencil

Optional

- Ruler or tape measure (at least 60 inches long)
- Waterproof footwear and other raingear
- Rag or papertowels for cleaning hands
- Small blade knife (less than 3 inches), a knife with a rigid blade is recommended. Knives with hinged blades can fold back on your fingers when examining the soil. An old butter knife or a spoon can be used.
- A way to measure distances of at least 100 feet.
- A small container of water (less than 8 ounces).