

SOILS!

Teaching Resources

Developed and written by soil scientists.
Free educational resources from the Soil Science Society of America.

Soil Science Society of America

Soil Basics | Soil by Subject | Around the World

K-12 Soil Science Teacher Resources

Ask A Scientist | Glossary | Soil Store | Lessons & Activities

KNOW SOIL KNOW LIFE
DAVID L. LINDBO, DEB A. KOZLOWSKI, AND CLAY ROBINSON, Editors

Educator's Guide

Searchable Database, Lessons, and Activities

DIG IT! The Scoop on Soil.

Soil is a complex mix of organic materials, air, water, and organic matter—decaying remains of once-living things and countless organisms.

Why is Soil Important? You need it for...

- Food
- Water
- Climate
- AG & Water
- Buildings

How does soil become soil?
There are many different soils in the world. All soils are different because of where and how they formed. Over time, 3 major factors play a part in how a soil forms. Together these factors are called **CLOMPT**.

CLOMPT | 5 factors of soil formation

C	L	O	M	P	T
Climate	Organisms	Parent Material	Topography	Time	Human Activities
C - Temperature and precipitation affect the rate of weathering and the amount of organic matter that enters the soil.	O - Plant roots and animal activity break up parent material and add organic matter to the soil.	P - The type of the parent material and how it was formed affect the soil's texture and chemical composition.	T - The shape of the land affects the amount of soil that can be formed and the amount of water that can be held in the soil.	T - The longer the soil has been forming, the more developed it is.	H - Changes in land use, such as agriculture, can affect soil formation.

Soils are always forming and changing

Dig Deeper
Soil comes in many colors—from blue-gray to brown to red. Soil has layers called horizons. These horizons are called soil profiles (often 0A).

Soil is composed of different soil particles: sand, silt, and clay.

Soil Profile

This is just the beginning of the exciting world of soil!
soils4teachers.org | soils4teachers.org

Newly Designed! Website Resources

soils4teachers.org

Our K-12 outreach site is dedicated to the needs of teachers/educators, providing ready resources for the classroom. Key sections include:

- soil basics,
- soils by subject,
- land and people,
- lessons/activities,
- additional resources (webinars, Ask a Soil Scientist), and
- free classroom items.

soils4kids.org

This website is for students and describes soil basics, provides Fun with Soil games, science-fair experiments, and describes careers in soil science. It also has a section organized by grade levels.

New! Searchable Database

soils4teachers.org/lessons-and-activities

Our new database of teaching resources includes activities, labs, demonstrations, and more. This database can be searched by activity type, current NGSS standards, grade level, subject area, and more.

And, create binders to keep track of resources that fit within class curricula. Currently there are 250+ resources in the database.

New! Educator's Guides

soils4teachers.org/kskl

Know Soil Know Life, written for the high school and introductory college-level student, provides a deep dive into soil science topics including physical properties, biology, formation, chemical properties, classification, environmental science, biomes, soils and society, and careers in soil science.

The educator's guide, enhances the usability of the book by demonstrating how to integrate topics into classroom curriculum. Chapter components include:

- overview,
- teaching sequence and pacing guide,
- accompanying PowerPoint,
- hands-on activities supporting the chapter materials,
- list of relevant NGSS standards addressed,
- assessments,
- and more.

A grade 3-5 curriculum guide and teacher's guide for *Soil! Get the Inside Scoop* are also available.

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“ Thank you all PROFUSELY for the many age appropriate lessons and activities on your site!

I have only skimmed the surface and I'm excited about the variety of topics and activities!”

Julia Pearsall,
Environmental Science
Teacher

Request Your
FREE copy of Our
Soils Poster!



soils4teachers.org

Founded in 1936, the Soil Science Society of America (SSSA) has 5000+ members and students around the world who are dedicated to advancing soil science through research, education, practice, and outreach. One of the strengths of SSSA and our members is the understanding and application of science to the development of educational resources such as those highlighted in this flyer.