Science Societies

SSSA teacher grants expand soil science learning across North America

By Ellen Phillips and Missy Holzer

November 10, 2026



From Hawaii to Rhode Island, SSSA teacher grants are helping educators bring soil science to life through hands-on investigations, school gardens,

composting projects, and field research. Read about how seven innovative programs reached more than 1,200 students and inspired the next generation of soil stewards.

Connecting youth to the ecosystems beneath their feet is the ultimate goal of the Soil Science Education Materials Grants provided by the SSSA K-12 Outreach Committee and the Agronomic Science Foundation (ASF). The ASF supports ASA, CSSA, and SSSA activities, programs, and projects that make a difference in the future of agronomy, crop science, and soil science. During the 2025–2026 school year, seven educators across the U.S. and Puerto Rico transformed their classrooms, school gardens, outdoor learning centers, and even residential science camps using the supplies purchased with their $500 grant award. Their projects reached students from elementary through high school, demonstrating the power of hands-on soil science to spark curiosity and deepen understanding about soil.

The 2025–2026 cohort used their grant funds to purchase soil probes, microscopes, worm-composting systems, nutrient test kits, seedling trays, field bags, and other essential tools. These materials enabled students to conduct authentic investigations—collecting soil samples, analyzing macronutrients, observing soil organisms, testing pH, comparing soil textures, and designing experiments that connected soil health to plant growth, environmental quality, and sustainability.

Across all projects, students were highly engaged. They asked questions, designed experiments, collaborated in teams, and made discoveries that shifted their understanding of soil from “just dirt” to a living, dynamic system essential to food production, ecosystems, and climate resilience.

Hands-on science in action: Highlights from the 2025–2026 grant recipients

APW Junior/Senior High School, New York

- **The Impact of Salinization and Fertilizers on New York Soil Quality**
  - Students expanded their geology unit into a full soil investigation using probes, stability kits, and NPK tests.



Daniel K. Inouye Elementary School, Hawaii

- **The Dirt on DKI: What's Beneath Our Slippahs?**
  - Over 600 students became “soil detectives,” exploring soil composition, organisms, and pH through interdisciplinary lessons.

Eastham Elementary School, Massachusetts

- **Soil Superstars. Vermicomposting and Vegetable Growth in the School Garden**
    - Fourth graders built a worm farm and conducted experiments on germination, substrate conditions, and nutrient cycling.

Somerset County 4-H, New Jersey

- **Human Ecology From Soil to You**
    - Youth participated in soil testing, composting demonstrations, and hands-on experiments.

Shady Creek Outdoor School, California

- **Soil Class and Soil to the Stars Initiative**
    - Students conducted NASA-aligned soil investigations using probes, color charts, and field backpacks.



Amarapu Biology Program, Texas

What are teachers who received grants saying?

“The best learning happens when students can visualize the data…”

“pH analyzers are of great help, and we use them in all of the investigations we conducted.”

“I think the best part of learning during these labs is the discussions [students] had while working on their analysis and drawing their conclusions. Learning about soil analysis was also a game changer as they learned about carbon, water, nitrogen and phosphorus cycles, and it gave them an opportunity to connect the cycles to soil.”

—Amarapu Biology Program, Texas

“These hands-on experiences directly supported their understanding of core soil and plant science concepts, including the role of soil structure and organic matter, water retention, nutrient availability, and the way soil quality influences the final agricultural product.”

—Andrea Howard, Eastham Elementary School, Massachusetts

“The students were the ones who picked the topic of soil quality with a focus on salt and nitrate phosphates. They also picked all of our field sites and conducted all the sampling and testing themselves.”

— APW Junior/Senior High School, New York

“Our students became soil detectives.”

“In a collaborative cross-circular effort, our specialist team, including Ag-tech, Art, Music, Library, and PE, incorporated the Soil Mystery lessons into all aspects of engaging students in the classroom and outside.”

—Daniel K. Inouye Elementary School, Hawaii

“Students were highly engaged in real world science.”

—Mary Yangzon, Fort Morgan High School, Colorado

“Several students are now pursuing soil and environmental science careers.”

“One student joined the Envirothon team as the “soil expert” and has shared what he knows with the whole Envirothon team of 16.”

—Meredith Ashworth, Rhode Island

“This grant allowed us to expand our soils class dramatically.”

“Students gather soil samples from the garden, forest, and creek bed. The students are surprised at all the different colors that soil can be.”

—Michael Shanahan, Shady Creek Outdoor School, California

“Youth gained awareness of their role in environmental stewardship.”

“Students reflected on how human actions affect soil health and sustainability.”

“These activities promoted experiential learning, allowing students to directly apply soil science concepts and better understand ecological relationships.”
—Somerset County 4-H, New Jersey

- **Soil Analysis, Seed Germination and Macronutrient Investigations**
  - IB biology students designed experiments on germination, macronutrients, and fertilizer impacts.

Meredith Ashworth, Rhode Island

- **Soil Profiles, Wetland Boundaries, and Coastal Processes**
  - Students investigated soil profiles, hydric boundaries, erosion, and deposition.

This program since its inception in 2023 has received approximately 40 teacher grant proposals per year, which are evaluated by committee members. Applications have come from 32 states, Puerto Rico, and Canada. More than half of the applications received and among those awarded grants were Title I schools. The latest funding cycle provides awarded teachers with $750 to purchase supplies.

Collective impact of 2025–2026 grants

- *Over 1,200 students reached.*
- *20+ educators involved.*

- *Durable equipment purchased for long-term soil science instruction.*
- *Increased interest in soil, environmental, and agricultural careers.*

2027–2028 key deadlines for SSSA K-12 Education Grant

- *Feb. 1, 2027: Grant announcement.*
- *Apr. 30, 2027: Application deadline.*
- *June 4, 2027: Awardees notified.*
- *Apr. 28, 2028: Submit final report, photos, and budget expenditures.*

How can you help? Watch for an announcement of the 2027 SSSA K-12 Education Grant in the new year. Get the word out to teachers about this opportunity, which is open to all K-12 teachers in North America. Contact your local schools or your children's teachers about the grant program. Reach out to Matt Wascavage at mwascavage@sciencesocieties.org (send message) with any questions.

> **SSSA K-12 Outreach Committee accomplishments continue growing!**
>
> The SSSA K-12 Outreach Committee is composed of SSSA members dedicated to sharing the story of soils for the K-12 audience. This passionate committee continues to act on its charge with numerous outreach and dissemination

projects. Committee members have developed a comprehensive soils education website (Soils4Teachers.org), written books, developed curriculum materials, and provided teacher training.

The committee is supported by SSSA, grants, and the many in-kind hours and efforts of its dedicated members. View our numerous accomplishments.

We are looking for more committee members! Visit the volunteer page and select the SSSA K-12 Committee.

Soils4Teachers .org

Join committee

Ask a question

Back to issue

Text © . The authors. CC BY-NC-ND 4.0. Except where otherwise noted, images are subject to copyright. Any reuse without express permission from the copyright owner is prohibited.