SOIL AND PLANT SCIENCE DIVISION

Technical Soil Services

South Central Region

Kerrville, Texas, Soil Survey Office

Bandera County Soil and Water Conservation District Ag Day

Purpose

The purpose of the Technical Soil Service was to help sixth-grade students from Bandera County understand what soil is and the role it plays in their daily lives.

Background

On Friday April 28, 2023, the Kerrville Soil Survey Office (SSO) drove south to Bandera, Texas, for the Bandera County Soil and Water Conservation District Ag Day. During the day, Travis Waiser and Monica Polgar gave educational talks to sixth-grade students over the course of eight 25-minute sessions, presenting to 161 students and their teachers. To begin their talks, Travis and Monica discussed what an ecosystem is and how soil fits into the bigger picture. From there, they discussed the four components that make up soil: mineral matter, water, air, and organic matter. Travis and Monica helped students list off the many impacts soil has on our daily lives. Most of the discussed values of soil centered around their role in supporting plant life. Plants provide oxygen as well as food production for both humans and livestock, improve water infiltration, provide materials to create shelter, and can be transformed into clothing. Travis and Monica then talked about the different soil particle sizes and how these particle sizes and their combinations may influence the plants that grow within them. To make distinctions between soil types, they compared sand to a beach ball, silt to a baseball, and clay to hole punches.

Key Outcomes

The students were excited to learn about how soil impacts their daily lives from the clothes they wear to the food they eat. Following this Ag Day, students have a better understanding of what components make up soil, the differences in soil particles sizes, and the influence soil has on core aspects of their lives.

Monica Polgar (Kerrville SSO, Ecological Site Specialist) used rocks to illustrate to students where soil mineral matter originates from.

Travis Waiser (Kerrville SSO, Soil Scientist and MLRA Leader) used a beach ball to help students visualize the shape and size of a sand particle magnified 1,000 times.